Graduate School of Business

The Impact of Organisational Culture and Internal Corporate Governance on Organisational Performance in Indonesian Companies

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This thesis is presented for the degree of
Doctor of Philosophy
of
Curtin University of Technology

May 2008

Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature:

Date: 23 May 2008

Acknowledgments

I would like to express my sincere thanks to my supervisors, Prof. Robert Evans and Prof. Mohammed Quaddus, for their endless encouragement, support, and instructive and valuable supervision throughout this study. Having both on my thesis committee has been beneficial for shaping the arguments and insights of this research. My gratitude is also due to the chairperson of my PhD thesis committee, Dr. Margaret McCabe.

I am also grateful to many people for their various contributions to the completion of my thesis: Prof. Zaki Baridwan, Prof. Mas'ud Machfoedz, Dr. Adi Djoko Guritno, Mr. Placidus Sudibyo, and Dr. Supriyadi and colleagues for their support during my fieldwork in Indonesia; and Dr. Bambang Riyanto LS, Mr. Anis Baridwan, Mr. Mas Ahmad Daniri, and Dr. Khomsiyah for their contribution in sharing their experiences and practices relating to corporate governance issues in Indonesia. I would like further thank to Dr. Didi Achjari, for his vital assistance in the first step of my doctoral plan at the Graduate School of Business, Curtin Business School, in Curtin University of Technology. Also, I would like to express my gratitude to my mentors, Prof. Insukindro, Prof. Jogiyanto Hartono, Dr. Hani Handoko, and Dr. B.M. Purwanto during my time of preparation to take this doctoral degree. My appreciation goes to all my respondents: without their cooperation and sharing their knowledge and experiences with me, the thesis would not have been possible.

Many thanks also go to administrative supports of Joanne (Jo) Boycott, and financial support of AUSAID managed by Julie Craig and Carolyn Mascall of the International Office. All of you made my academic journey easier. For help in editing of this document, I thank Chris Walker.

I would like to extend my appreciation to all my family members. My father, who was an encouraging father, passed away near the beginning of my doctoral study. I am grateful to my father and mother for their endless support to me in pursuing my academic career. My appreciation also goes to my father- and mother-in-law for their encouragement. Similarly, my thank goes to my family members in Wonogiri, Kulon Progo, and Jakarta for their support and motivation.

With love and deep appreciation, I acknowledge my wife, Dasih, and our daughter, Fina, and our son, Fazi, for their prayers, sacrifices and endless support to make this dream come true. We are together experiencing this journey, up and down, with affection and love. Therefore, to them (Dasih, Fina, and Fazi) this dissertation is dedicated.

Abstract

This study investigates Indonesian firms managers' and executives' perception of the impact of organisational culture and internal corporate governance on organisational performance. The research was motivated by the slow progress in improving organisational performance following the economic crisis in Indonesia from 1997 to 1998. In general, literature suggests that a positive organisational culture is a resource that produces better organisational performance; there is also acknowledgment of the importance of organisational culture on corporate governance; and that improved corporate governance brings better organisational performance.

The relationship between organisational culture, internal corporate governance, and organisational performance has been tested. However, empirical measurements and tests are limited with mixed results and largely based in western countries. This research is undertaken in Indonesia to contribute to the body of knowledge by adopting a detailed and different way of measuring internal corporate governance and organisational culture in the context of Indonesia. In particular, a two-tier corporate governance system in Indonesia dictates a very different practice of internal corporate governance compared to those of western systems. As no comprehensive measure of organisational culture is available in the Indonesian context, this study also incorporates an organisational culture measure. Also, as the validity and the reliability of secondary data in Indonesia are subject to debate, this study uses primary data as alternative measure of organisational performance.

The study first develops a research model that links the constructs of organisational culture, internal corporate governance and organisational performance. This is followed by developing a research instrument based on theoretical reviews and interviews, which is pilot-tested in a later stage of instrument development. A field-survey is then administered to 1000 managers and company executives to gather the data. Of the useable responses, the measures for constructs are developed and tested using factor analysis and structural equation modelling, and the hypotheses are empirically tested using structural equation modelling.

The results of the research show that organisational culture is not a statistically significant determinant of organisational performance. Organisational culture, however, is a strong determinant of internal corporate governance. Lastly, internal corporate governance does not significantly impact organisational performance.

The above results confirm that both organisational culture and internal corporate governance are positively related to performance, but are not statistically significant. This weak linkage to performance is contested with the mixed results identified in Western countries and may be explained by the different construct definition and measurement methods applied in the various studies. There is a need to look at the longitudinal view of the relationship of the constructs in future research to provide fresh evidence and also to reveal the extent to which the new concept of internal corporate governance has been embraced by corporate officers over time. There is also need to look at successful and unsuccessful companies to identify the best practices.

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Chapter 1: Introduction

1.1 Background

Following the economic crisis that hampered several Asian countries from 1997 to 1998, efforts have been carried out to rebuild the economy of affected countries. International bodies, such as the World Bank (WB), the International Monetary Fund (IMF), the Asian Development Bank (ADB), and the Organisation for Economic Co-operation and Development (OECD) sought solutions for the problems faced by many Asian countries. In Indonesia, the IMF in particular urged a wide-ranging institutional reform which included reforming the governance of the government and corporations (Sato 2004), while the ADB launched a study of corporate governance and financing in November 1998 (Capulong et al. 2000). These were in accordance with the program of the OECD, in which its Principles of Corporate Governance offered a benchmark of a country's corporate governance framework and company practices (OECD 1999). In a similar effort, the World Bank worked closely with government to overcome poverty and reduce Indonesia's financial burden, which can be seen in the Country Assistance Strategy of the World Bank *(Indonesia Country Assistance Strategy FY 04-07 2003*).

The Government of Indonesia itself, considering it had been severely affected by the economic crisis, had been implementing legal restructures and creating new institutions to deal with poorly governed and poorly performing firms. For instance, a new bankruptcy law was enacted in 1998[1], and subsequently, in 1999[2] the government of Indonesia ratified laws against corruption, collusion and nepotism. At the same time, authorities in Indonesia created the Indonesian Bank Restructuring Agency or IBRA (*Badan Penyehatan Perbankan National* or BPPN) in 1998 to restructure troubled banks; and they formed the Indonesian Debt Restructuring

[1] The Law of Bankruptcy of June 1905 was amended with Government Regulation in lieu of Law No.1 of 1998. This new regulation then was confirmed by Parliament in the Bankruptcy Law, Law 4 of 1998. Furthermore, in 2004, Law 4 of 1998 was replaced with the Bankruptcy and Suspension of Debt Payments Law, Law 37 of 2004.

[2] Law 28 of 1999, on the establishment of a state free from corruption, collusion and nepotism. This was supported by Law 31 of 1999, which was amended by Law 20 of 2001, on the eradication of corruption as a criminal offence. Further efforts to eliminate corruption were then strengthened with the ratification of Law 30 of 2002 on the Corruption Eradication Commission.

Agency or IDRA to reorganise foreign debts. To date, however, the progress seems to have been very slow.

The impediments to progress have not been analysed thoroughly; to date there has not been much published work on Indonesian corporate performance and governance (see, for instance, Lukviarman 2004; Nam and Nam 2004). To make matters worse, rigorous studies dealing with particular causes that have made Indonesian firms poorly performed have not been undertaken. To simply assert that Indonesian firms are badly governed is not enough. Economy-wide approaches such as legal restructuring and new institution building may create the necessary conditions, but alone they are not sufficient to overcome poorly performed and poorly governed firms. Similarly, a country culture-wide approach[3] is unlikely to touch the bottom line of corporate governance as it is within companies the corporate governance takes place. As, by definition, corporate governance is 'the system by which companies are directed and controlled' (Cadbury Committee 1992), a more precise study should be directed at the extent to which corporate governance is practiced within the firm. This is also emphasised by the Dean of Asian Development Bank Institute who stated 'it is often the case that important aspects of governance issues need to be tackled at the firms…' (McCawley 2005 p. 1).

Subsequently, following McCawley's line of thinking, a growing number of studies in corporate governance have acknowledged the importance of the firm-level approach to corporate governance. For example, institutional investors, including the California Public Employees' Retirement System (CalPERS) and the Teachers Insurance and Annuity Association - College Retirement Equities Fund (TIAA - CREF) are requesting that firms be managed effectively (Crutchey, Hudson, and Jensen 1998; *TIAA-CREF A Concerned Investor* 2005), while a variety of organisations have published guidelines for corporate governance, such as the Cadbury Report of The Financial Aspects of Corporate Governance (Jones and Pollitt 2004), and the Commission on Director Professionalism of the National Association of Corporate Directors (NACD) (Daily, Dalton, and Cannella Jr 2003). Promising moves such as these need to take place in developing countries, such as Indonesia, if better corporate performance and governance are to occur.

[3] This can be seen in the reports of international bodies, such as the IMF, the World Bank and the OECD. They have highlighted that the unsuccessful implementation of their programs to aid developing countries has been due to the ignorance of the cultural factors of those countries.

In regard to the study of corporate governance, several weaknesses can be highlighted. To name a few: its mixed results, and the fact that it has been largely undertaken in western countries, meaning the research's outcomes are almost impossible to apply in other circumstances. To make matters worse, the debate relating to the cause of poorly governed and poorly performing firms has mostly been analysed from either the strategic choice or the environmental perspective (Astley and Van de Ven 1983; Helfat and Peteraf 2003; Porter 1980) and disentangling the effects of either one is difficult. To overcome such a dilemma, Yoshimori (2005), proposed the internal corporate governance mechanism within which the duties of all a company's governance structures or organs should be assessed. This mechanism is the reflection of governance practice within firm.

Having observed that organisational culture is a resource that produces a firm's competitive advantage (Hitt et al. 2001) which in turn enables a firm to achieve better performance, this study examines the relationship between organisational culture and organisational performance. Although studies relating these variables were undertaken in the past (Wilderom, Glunk, and Maslowski 2000), the explanatory power of organisational culture is even more important nowadays, as 'intangible resources are more than tangible resources to produce a competitive advantage' (Hitt et al. 2001 p. 14). In this context, Indonesian companies are no exception, since organisational culture is a long-lasting resource that delivers better organisational performance. This is due to the nature of organisational culture, which is considered valuable, rare, inimitable, and nonsubstitable (Barney 1986).

With regard to the importance of culture on corporate governance, it is unfortunate that there have been few published works on this relationship. The argument advanced here is similar to that of Tabalujan (2002 p. 31) who claimed that 'mainstream corporate governance literature largely ignores the role of culture in corporate governance'. If cultural factors are to be given due weight, they need to be studied rigorously in order to reveal their role in corporate governance. Treating culture as a residual factor (Bebchuk and Roe 1999), one that merely accounts for discrepancies that have not been explained by the research variables, should be answered by incorporating organisational culture into corporate governance research. This is even more important if one considers the contribution of organisational culture in the fulfilment of the duties of companies' governance structures (Schein 1991; Semenov 2000).

From the theoretical point of view, internal corporate governance helps to prevent corporate scandals, frauds, and any potential liability that may damage the company. A company with a good internal corporate governance image enhances its reputation, and makes it more attractive to customers, investors, and suppliers. Usually, the better-governed companies will have better organisational performance (Florackis 2005). Unfortunately, published studies relating internal corporate governance and performance, particularly post economic crisis in Indonesia, is sparse. Further, observing that the corporate governance system in Indonesia is unique in terms of its two-tier system, this research is required to fill the gap in the lack of published work in this area, and to observe the nature of internal corporate governance employed by Indonesian companies.

1.2 Research Questions

The above discussion highlights the following. First, there is the acknowledgment of the importance of culture to organisational performance. Second, there is the absence of rigorous studies revealing the power of organisational culture in determining corporate governance. Third, there is an appreciation of the importance of internal corporate governance in guarding corporations from activities that places them in jeopardy. Therefore the research questions developed for this study are:

a. Does organisational culture affect organisational performance?
b. Does organisational culture affect internal corporate governance?
c. Does internal corporate governance affect organisational performance?

1.3 Objectives

Based on the above questions the research objectives of the study are:

a. To examine the impact of an organisation's culture on organisational performance;
b. To examine the impact of an organisation's culture on internal corporate governance; and
c. To examine the impact of internal corporate governance on organisational performance.

1.4 Significance

This study investigates the impact of organisational culture and internal corporate governance on performance. Further, the proposed study addresses the issue of culture as the central determinant of internal corporate governance. In most previous studies culture has either been omitted or insufficiently measured. Studies carried out by Stulz and Williamson (2002) and Haniffa and Cooke (2002), for instance, suffered from a lack of comprehensive measurement of culture, and thus did not precisely observe the impact of organisational culture and internal corporate governance on performance. In addition, the two-tier board system in Indonesia (Husnan 2000) makes this study unique since most previous studies of corporate governance have taken place on a one-tier systems. Within a two-tier system the board of commissioners (BOC) is the owners' representative, elected by shareholders, and it has the duty to appoint and oversee the board of directors (BOD). The BOD leads the company and makes strategic and operational decisions which are executed by managers. Thus the BOC – not the BOD – has the right to obtain any information relating to the firm, to ask for an audience with directors, and, to call a shareholders' meeting if necessary (Husnan 2000). Although research on corporate governance in Indonesia has been carried out recently (Lukviarman 2004), the involvement of cultural variables is a major innovation in explaining the impact of organisational culture and internal corporate governance upon performance in Indonesian companies.

From a practical point of view, this study is expected to give a clear picture of how Indonesian companies behave and to assist both domestic and foreign investors in making informed investment decisions. As the government of Indonesia has established the National Committee of Corporate Governance (NCCG), which provides principles and guidance to the good governance of companies, it is worth knowing the extent to which companies in Indonesia comply with or respond to these principles. It is also beneficial to understand how corporate culture plays a role in internal corporate governance mechanisms and organisational performance. Given these expectations, this study will contribute valuable recommendations or guidelines for governing companies efficiently and effectively.

1.5 Organisation of Thesis

Following this chapter, the thesis will be organised as follows. Chapter Two presents a review of the relevant literature and the theoretical background that underpins this research. Chapter Three describes the research paradigm, research model, and hypotheses development of this study. In the first part of this chapter, the research paradigm will be discussed, and the choice of realist paradigm that this study will use will be embraced. The next section will describe the research model employed by this study and a definition of terms used. Finally, based on the literature review in Chapter Two, Chapter Three develops the research hypotheses.

Chapter Four illustrates the research design and methods that are used in this study. The development of the research instrument will also be discussed in detail. The instruments validation and data collection procedure and a discussion relating to data analysis are also described.

Chapter Five provides the procedure of conducting pre-test and pilot studies. The chapter also presents demographic characteristics of the pilot studies. Qualitative and quantitative validations of the research instrument are also presented in this chapter.

Chapter Six presents survey results and factor analysis. In the first section, the response rate and the demographic characteristics of respondents will be highlighted. In the second section, discussions related to the method of factor analysis, the use of a correlation matrix, factor extraction, factor rotation, reliability analysis, and construct validity analysis are presented. Results of factor analysis are also presented in Chapter Six.

Chapter Seven presents the results of using LISREL in analysing the data collected using the questionnaire. The discussion relating to the selection of estimation method within LISREL software is provided. The measurement properties and the assessment of structural path are discussed. Chapter Seven also presents hypotheses testing for the research model.

Chapter Eight presents the results of hypotheses testing, model analysis and the implications of those results. A discussion regarding the managerial implications of this study is presented in the last part of this chapter.

As a conclusion, Chapter Nine provides a summary of this study. The significance of the result, limitations of this study and potential areas of further research also will be highlighted in this chapter.

1.6 Summary

Despite wide-ranging recovery programs having been conducted by international bodies and the government of Indonesia as a response to the economic crisis that hit this nation during 1997-1998, the progress has been slow. Past studies indicated that the unsuccessful implementation of programs designed by international bodies to aid developing countries was due to ignorance of cultural factors. In addition, economy-wide approaches in the form of legal structures and new institution building are deemed insufficient in overcoming poorly governed and poorly performing firms, as many important aspects of governance need to be tackled at the firm level.

The current study aims to extend past studies by investigating the impact of organisational culture and internal corporate governance on organisational performance in Indonesian companies. The contributions expected from this study are, among many others, to observe the impact of organisational culture and internal corporate governance upon performance in Indonesian companies, to address the issue of culture and its role as a determinant of internal corporate governance, and to gather insight into the extent to which the companies in Indonesia comply or respond to the principles and guidelines for good governance which have been established by National Committee of Corporate Governance (NCCG).

Chapter 2: Literature Review[*†]

2.1 Introduction

This chapter presents a literature review of the major issues in this dissertation. First, the principal themes relating to organisational culture, the perspective of qualitative and quantitative studies on organisational culture, and the approaches to and the content of the organisational culture construct are highlighted. Second, primary themes relating to corporate governance and internal corporate governance are reviewed, and important findings in these areas are highlighted. The chapter also highlights the primary themes regarding organisational performance. Third, the chapter contains a review of the relationship between organisational culture and organisational performance; organisational culture and internal corporate

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[*] Part of this chapter has been presented at the following conferences:

Wibowo, A (2005), "The Impact of Organisational Culture and Internal Corporate Governance on Performance: A Conceptual Framework", in *International Seminar towards a New Indonesia*, (CD ROM), Faculty of Economics - Gadjah Mada University, Yogyakarta, 16-17 September.

Wibowo, A., Evans, R., and Quaddus, M (2007), "Does Organisational Culture Affect Organisational Performance? A Study of Indonesian Companies", in *Proceeding of the 7th Asian Academy of Management Conference,* eds. Nasurdin, A., Ibrahim, D.S., Osman, I., Haron, M.S., Hoo, Q.C., Ali, R., Ramayah, T., Zainuddin, Y. and Ahmad, Z.A., Asian Academy of Management and School of Management - Universiti Sains Malaysia, Malaysia, 21-25 May, pp. 242-251.

Wibowo, A., Evans, R., and Quaddus, M (2007), "The Impact of Internal Corporate Governance on Organisational Performance in Indonesian Companies", in *Proceeding of the 10th International Conference of the Society for Global Business and Economic Development,* eds. C. Jayachandran, K. Okachi, C. Chakraborty, R. Misra and R. Lord - Montclair State University and Ryukoku University, Kyoto, 8-11 August, pp. 3064-3084.

Wibowo, A (2007), "Application of Confirmatory Factor Analysis to the Study of Internal Corporate Governance Construct: A Higher-Order Factor Model", in *Curtin Business School Doctoral Students' Colloquium 2007* – Curtin University of Technology, Perth, 30-31 August.

Evans R., Quaddus, M., and Wibowo, A (2007), "Does Organisational Culture Affect Internal Corporate Governance? A Study of Indonesian Companies", in *Proceeding of the 21st ANZAM 2007 Conference,* (CD ROM), ed. Ross Chapman - University of Western Sydney, Sydney, 4-7 December.

[†] Part of this chapter has been accepted and will be presented in the following conference:

Wibowo, A., Quaddus, M., and Evans, R (2008), "Partial and Total Disaggregation Framework of a Second-order Construct in the Relationship of Organisational Culture and Internal Corporate Governance", in *7th European Conference on Research Methodology (ECRM) for Business and Management Studies*, Conference Chair Peter Sharp - Regent's College, London, UK, 19-20 June 2008.

governance; and internal corporate governance and organisational performance. These reviews are to provide a thorough theoretical background for the research topic. These reviews are strengthened with a section that highlights the historical and regulatory development of corporate governance in Indonesia, and presents a broad overview of corporate governance in western countries.

2.2 Organisational Culture

In their comprehensive study, Kroeber and Kluckhohn (cited in Detert, Schroeder, and Mauriel 2000) reviewed over 150 definitions of culture from various literature. They determined it was very unlikely to have a single widely agreed upon conception or definition of culture. Nevertheless, research into organisational culture can not be overlooked as the number of studies investigating the topic grew considerably during the last century. Hundreds of journal articles and book chapters, and large volume of books, had been published in the 1980s (Gordon and DiTomaso 1992). In the late 1970s, Pettigrew (1979) introduced the term 'organisational culture' to the academic literature, and in the middle of that decade Silverzweig and Allen (1976) proposed the term 'corporate culture'. It seems that the popularity of these terms grew because of the works of Deal and Kennedy[4] (1982) and Peters and Waterman[5] (1982), who belonged to the McKinsey-Harvard Business School team. Since then, an enormous literature has developed on these topics. Although no conclusive definitions have been widely agreed upon among researchers, there are common characteristics of culture, which involve some combination of artefacts (also called practices, expressive symbols or forms), values and beliefs, and underlying assumptions that organisational members share about appropriate behaviour (Gordon and DiTomaso 1992; Schein 1992).

As organisational culture is a based theme, it can be viewed as values as well as practices. Viewing culture as values has been referred to by Schein (1992 p. 12), who defined culture as

[4] Their book, Corporate Cultures: The Rites and Rituals of Corporate Life, was regarded as a 'must-read' when it was published, and is still regarded as a 'must read' by Chris Argyris of Harvard University and Monitor Company. Over 200,000 copies had been sold, according to the most recent publication in 2000.

[5] Their management book, In Search of Excellence: Lessons from America's Best Run Companies, was and is regarded as the one of the biggest selling and most widely read business books. It is reported in the latest edition in 2004 that this book was #1 National Bestseller with more than 3 million copies in print.

> a pattern of shared basic assumption that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problem.

The term 'shared basic assumption' means that there are high levels of agreement among members of an organisation toward a set of values within that organisation. Alternatively, viewing organisational culture as perceptions of organisational work practices has also been documented in many previous studies (Kostova 1999; Marcoulides and Heck 1993). In this regard, Kostova (1999, p. 309) defined it as

> particular ways of conducting organisational functions that have evolved over time under the influence of an organisation's history, people, interests, and actions and that have become institutionalised in the organisation.

Here, organisational practices are believed to reflect the 'collective wisdom within an organisation about how things can best be done' (Wilderom and Van den Berg 2005, p. 6).

Viewed from a different perspective, organisational culture is like an onion – its elements have different levels of visibility, ranging from the most visible to the least visible (Schein 1992). The former reside in the external layer of cultural elements, examples of which are visible and audible behavioural patterns, and a constructed physical and social environment. By contrast, the latter exist in the deepest layer of culture, which includes basic assumptions and beliefs about human nature, and humans' relationship to the environment. In this regard, the parts of culture that reside in the deeper levels are more difficult and time-consuming to change than those which are on the surface (Kilmann cited in De Witte and Van Muijen 1999).

Seen in this light, the organisational work practices proposed by Kostova are undeniably visible, and reflect the shared knowledge and competence of the organisation. These practices are learned behaviours that can be transmitted from one group to another or one generation to another independent of genetics (Redmon and Mason 2001). Further, these practices are viewed as ways of doing certain tasks that are taken-for-granted (Kostova 1999). Assessing organisational work practices is also easier — since they are visible and audible — compared to assessing shared values — as these are sometimes unrecognisable to the members of an organisation.

An emphasis on shared values makes the idea of cultural strength arise, which suggests that employees have a similar set of values. Strong cultures have been defined as homogeneous (Ouchi and Price 1978); thick and widely shared (Sathe 1983); cohesive and tight-knit (Deal and Kennedy 1982); characterised by congruent rule-based expectations (Schall 1983); stable and more intense (Schein 1984); fully articulated and highly differentiated (Schein 1985); and coherent (Weick 1985). In accordance with these above arguments, Peters and Waterman (1982) and Deal and Kennedy (1982) strongly argued that excellent companies were characterised by a set of values to which employees were undeniably committed. The above arguments lend support to the conclusion that a notion of widespread sharing or consensus is the dominant characteristic of strong culture. Weak culture, on the other hand, can be defined as the opposite of the above definitions. In their popular book, Deal and Kennedy argued that both weak and strong culture can exist, and in strong culture 'everyone knows the goals of the corporation and they are working for them' (p. 4). Accordingly, there is alignment between employees' and management's goals.

Looking at the methodology of assessing strong cultures, one can conclude that cultural strength was assessed using the frequency of agreement among the members of an organisation. The higher the frequency of agreement about norms and values the higher the strength of the culture (Gordon and DiTomaso 1992; Kotter and Heskett 1992; O'Reilly and Chatman 1996). However, caution should be taken as 'meanings are central, not frequencies' (Van Maanen and Barley 1984, p. 307). Further, cultural strength is believed to be too limited to capture the complex phenomenon of culture (Van den Berg and Wilderom 2004). As the most cited reference relating to strong culture, the works of Deal and Kennedy (1982) and Peters and Waterman (1982) failed to prove their claims. Carroll (1983) indicated that some of Peters and Waterman's 36 'excellent companies' experienced serious financial problems just a few years after the completion their study. Another convincing claim was published in *Business Week* (1984, 5 November), which stated that thirteen of the 'excellent companies' faced financial and/or market difficulties, most of them because they did not adapt to the evolution of their environment. This finding is not surprising, especially for Cooke and Szumal (2000) who found that it

was not the espoused values that have a direct relationship to the organisational outcomes, but rather the operating culture of an organisation[6].

Since knowledge about organisational culture has emerged to the point where its finer dimensions are available, future research can be better conducted using cultural dimensions rather than consensus among employees on a particular set of values. Further, as organisations show more differences in practices than in values (Hofstede 2001), research might better focus on organisational practices. Providing support for this argument, Wilderom and Van den Berg (2000), who define organisational culture as organisational practices, argue that values are naturally invisible and that organisational practices typically express the organisational values.

Having followed definition of organisational culture as perceptions of organisational practices, the study acknowledges the similarity of this concept with organisational climate. Denison (1996), for instance, defined organisational climate as employees' perceptions of observable practices and procedures. In the early days, the distinction between climate and culture was clear, as Schwartz and Davis (1981, p. 32) emphasised, 'one way to understand culture is to understand what it is not', and as Denison (1996, p. 621) stressed, 'whatever culture is, it is not climate'. Other stark differences between these concepts can be appreciated by looking at the methods that were used. Most previous studies on culture were dominated by qualitative research methods and an appreciation for the unique aspects of individual social settings (Schein 2000; Denison 1996; Van den Berg and Wilderom 2004; Siehl and Martin 1988). In contrast, studying organisational climate predominantly required quantitative methods and assumed generalisation across social settings (Schneider 2000; Denison 1996; Van den Berg and Wilderom 2004).

More recently, however, a blur in the distinction has emerged. Many studies of organisational culture have begun to use quantitative methods or a combination of qualitative and quantitative methods (Chatman 1991; Denison and Mishra 1995; Gordon and DiTomaso 1992; Hofstede et al. 1990; O'Reilly, Chatman, and Cadwell 1991). Further, what were believed to be the dimensions of climate have been also

[6] In backing up their argument Cooke and Szumal (2000) proposed a theoretical model of how culture works. They proposed an operating culture that arose from twelve sets of behavioural norms associated with three general types of organisational culture: constructive, passive/defensive, and aggressive/defensive. The behavioural norms were humanistic-encouraging, affiliative, approval, conventional, dependent, avoidance, oppositional, power, competitive, perfectionistic, achievement, and self-actualizing norms.

seen to be the dimensions of culture. Concisely stated, there is significant overlap between the dimensions used. Supporting this argument, Parker et al. (2003, p. 389), using a meta-analytic technique, claimed that there is 'considerable confusion regarding the constructs of … organisational climate, and organisational culture…'. Early on, Denison (1996) highlighted similar evidence and concluded that the dimensions of culture overlapped with the dimensions of climate. These are summarised in Table 2.1.

Table 2.1: Overlapping Dimensions in Culture and Climate Studies

No.	Culture Study	Climate Study
1	Risk taking (Chatman 1991)	Risk taking (Litwin & Stringer 1968)
2	Person-environment fit (O'Reilly, Chatman and Caldwell 1991)	Person-environment fit (Joyce & Slocum 1982)
3	Decision-making, communicating, and organising (Schwartz & Davis 1981)	Decision-making practices, communication flow, and the organisation of work (Taylor and Bowers (1973)
4	Peer relations (Schein 1985; Schein 1992)	Peer relations (Joyce & Slocum 1982)
5	Concept of social control (Wilkins 1978)	Concept of autonomy (Porter & Lawler 1973)
6	Humanistic culture (Cooke & Rousseau (1988)	Dimension of consideration (Campbell, Dunnette, Lawler & Weick 1970)

Note: Summarised from Denison's (1996) work.

For the purpose of this study, the overlapping dimensions of organisational culture and organisational climate are not stressed, rather they are assumed to represent the practices within an organisation, as 'culture and climate actually address a common phenomenon' (Denison 1996, p. 646).

As a current study, the work of Van den Berg and Wilderom (2004) is worth discussing. Obviously, their research is not the only study focusing on organisational culture. Many previous works which have studied organisational culture quantitatively can be named, such as Marcoulides and Hecks (1993), Van Muijen et al. (1999), Hofstede et al. (1990), O'Reilly, Chatman and Cadwell (1991), Gordon and DiTomaso (1992), and Denison and Mishra (1995), among others. A comparison of the above studies is made and is presented in the Table 2.2. Looking at this table in detail, one can note that the five dimensions of Van den Berg and Wilderom's (2004) organisational culture correspond with those of the other studies. *Autonomy*, for instance, although labelled differently by other studies, is associated with all

previous studies in Table 2.2. This is also the case for the *Human Resource Management* and *Improvement Orientation* dimensions, which have much correspondence with the *task organisation* of Marcoulides and Heck, *support orientation* of Van Muijen et al., the *employee vs. job oriented* dimension of Hofstede et al., the *people oriented* dimension of O'Reilly, Chatman and Cadwell, and all dimensions in the other studies mentioned in the table (although again labelled differently). Additionally, the two other dimensions of *External Orientation* and *Inter-departmental Coordination* have some association with dimension in other works. Therefore, on the basis of the literature review presented in Table 2.2, this study, which defines organisational culture as organisational practices, will use Van den Berg and Wilderom's (2004) cultural dimensions as the basic conceptual dimensions to measure the construct of organisational culture. These dimensions are 1) *autonomy*, 2) *external orientation*, 3) *interdepartmental coordination*, 4) *human-resource management*, and 5) *improvement orientation*. In accordance with these above dimensions, Detert et al. (2000), who performed a qualitative content analysis of the extant literature summarised in Table 2.3, lend support to utilising these dimensions in researching organisational culture.

Table 2.2: A Comparison of Van den Berg and Wilderom (2004)'s Organisational Culture Dimensions with Six Other Studies

Organisational culture dimensions in several studies grouped with respect to similarity						**Correspondence with Van den Berg & Wilderom (2004) organisational culture dimensions**				
Marcoulides & Heck (1993)	Van Muijen et al. (1999)	Hofstede et al.(1990)	O'Reily et al. (1991)	Gordon & DiTomaso (1992)	Denison & Mishra (1995)	Autonomy	External Orientation	Inter-departmental coordination	Human resource management	Improvement Orientation
	Goal orientation	Process vs. result orientation	Results oriented	Action oriented		-	+	-	+	+
Task organisation	Support orientation	Employee vs. job oriented	People oriented			+	-	-	++	+
Employee attitudes		Parochial vs. professional	Team oriented	Fairness of rewards	Involvement	+	-	+	+	+
Organisational climate		Open vs. closed system	Aggressive vs. easy going	Integration/communication Development/promotion from within		-	+	+	+	-
Organisational structure/purposes	Rules orientation	Loose vs. tight control	Detailed oriented stability	Accountability Systematic decision making	Consistency	++	-	+	-	-
Organisational values	Innovation orientation	Normative vs. pragmatic	Innovation oriented	Innovation/risk taking	Adaptability	+	+	-	-	++
				Clarity of strategy/shared goals	Mission	-	+	-	-	+

Note: - = hardly any correspondence, + = some correspondence, and ++ = much correspondence

Source: Van den Berg & Wilderom (2004, p. 575) and author's compilation

Table 2.3: General Dimensions of Organisational Culture from the Literature

Ideas About	References
1. The basis of truth and rationality in the organisation	Beyer (1998); Dyer (1985); Gordon & Cummins (1979); Halfhill, Betts, & Hearnsberger (1989); Hofstede (1991); Reynolds (1986); Saphier & King (1985); Sashkin (1996); Schein (1992); Tucker & McCoy (1988)
2. The nature of time and time horizon	Denison & Mishra (1995); Halfhill, Betts, & Hearnsberger (1989); Quinn & Rohrbaugh (1983); Reynolds (1986); Sashkin & Sashkin (1993); Schein (1992); Tucker & McCoy (1988)
3. Motivation	Beyer (1993); Dyer (1985); Hofstede (1991); Lorsch (1985); Reynolds (1986); Saphier & King (1985); Sashkin & Kiser (1991); Schein (1992); Tucker & McCoy (1988)
4. Stability versus change/innovation/ personal growth	Beyer (1998); Cooke & Szumal (1993); Denison & Mishra (1995); Gordon & Cummins (1979); Halfhill, Betts, & Hearnsberger (1989); Heck & Marcoulides (1996); Hofstede (1991); Kilman & Saxton (1991); Leithwood & Aitken (1995); Lortie (1975); Marcoulides & Heck (1993); O'Reilly, Chatman, & Caldwell (1991); Quinn & Rohrbaugh (1983); Reynolds (1986); Saphier & King (1985); Sashkin (1996); Snyder & Acker-Hocevar (1995)
5. Orientation to work, task, and coworkers	Cooke & Szumal (1993); Hofstede (1991); Kilman & Saxton (1991); Leithwood & Aitken (1995); O'Reilly, Chatman, & Caldwell (1991); Quinn & Rohrbaugh (1983); Reynolds (1986); Rokeach (1973); Saphier & King (1985); Sashkin (1996); Schein (1992); Tucker & McCoy (1988)
6. Isolation versus collaboration/cooperation	Denison & Mishra (1995); Firestone & Louis (1998); Halfhill, Betts, & Hearnsberger (1989); Heck & Marcoulides (1996); Hofstede (1991); Kilman & Saxton (1991); Leithwood & Aitken (1995); Lortie (1975); O'Reilly, Chatman, & Caldwell (1991); Quinn & Rohrbaugh (1983); Reynolds (1986); Saphier & King (1985); Sashkin (1996); Sashkin & Kiser (1993); Schein (1992); Smart & Hamm (1993); Tucker & McCoy (1988)
7. Control, coordination, and responsibility	Beyer (1998); Gordon & Cummins (1979); Halfhill, Betts, & Hearnsberger (1989); Heck & Marcoulides (1996); Hofstede (1991); Kilman & Saxton (1991); Leithwood & Aitken (1995); Leonard (1997); Quinn & Rohrbaugh (1983); Reynolds (1986); Sashkin (1996); Sashkin & Kiser (1993); Smart & Hamm (1993)
8. Orientation and focus-internal and/or external	Denison & Mishra (1995); Dyer (1985); Halfhill, Betts, & Hearnsberger (1989); Hofstede (1991); Leithwood & Aitken (1995); Leonard (1997); Quinn & Rohrbaugh (1983); Reynolds (1986); Sashkin (1996); Smart & Hamm (1993); Tucker & McCoy (1988)

Source: Detert et al. (2000, p. 854)

Combining the last two tables, this study highlights the following discussions. The dimension of *autonomy* was selected because it refers to the freedom of employees to contribute the skills they have in advancing the company. This dimension was also used by Gordon and DiTomaso (1992), who labelled it 'accountability and systematic decision making'; Marcoulides and Heck (1993) who named it 'organisational structure/purposes'; Hofstede et al. (1990) who labelled it 'loose vs. tight control'; and Detert et al. (2000), who termed it 'control, coordination, and responsibility'. The *external orientation* is similar to willingness

and effort to quickly anticipate and respond to customers' demands. The work of Hofstede et al. (1990) termed this as 'open vs. closed system'; the study of O'Reilly et al. (1991) labelled it as 'aggressive vs. easy going'; and the research of Detert et al. (2000) called it 'orientation and focus – internal and/or external' — each of which can be referred to this dimension. The dimension of *inter-departmental coordination* was chosen since modern organisations commonly have divisions of work, which increase the flow of work and information among members. As a result of increasing barriers, an organisation's functioning is likely to be adversely influenced. Previous studies which support the use of this dimension are O'Reilly et al. (1991), who used the term 'team oriented'; Denison and Mishra (1995) who labelled it as 'involvement'; and Detert et al. (2000) who named it 'isolation versus collaboration/cooperation'.

The *human resource management* dimension has been considered as one aspect of organisational culture by many in the past. Marcoulides and Heck (1993) termed it 'task organisation'; Van Muijen et al. (1999) named it ' support orientation'; Hofstede et al. (1990) labelled it 'employee vs. job oriented'; O'Reilly et al. (1991) called it 'people oriented'; and Detert et al. (2000) termed it 'orientation to work, task, and coworkers'. This dimension covers the process of employee selection, the support to employees' functioning and whether the performance mechanism was taking place. Reflecting humans' ambition, *improvement orientation* is utilised in this study. Most people are stimulated to achieve a better result both for themselves and their company. Backing the use of this dimension are the studies of Van Muijen et al. (1999), who labelled it 'innovation orientation'; O'Reilly et al. (1991) who named it 'innovation oriented', Gordon and DiTomaso (1992), who called it 'innovation/risk taking'; and Detert et al. (2000), who named it 'stability versus change / innovation / personal growth'.

2.3 Corporate Governance

Corporate governance is 'a fashionable concept, and like many fashionable concepts, it is somewhat ambiguous and a bit of cliché' (Farrar 2005, p. 3). No single definition has been approved by many scholars. Experts define corporate governance depending on the issues they would like to deal with. For example, Blair (1995 p. 3) has defined corporate governance as

> the whole set of legal, cultural, and institutional arrangements that determine what publicly traded corporations can do, who controls them, how that control is exercised, and how the risks and returns from the activities they undertake are allocated.

A broad definition is also used by Monks and Minow (2004, p. 2), who defined it as 'the structure that is intended to make sure that the right questions get asked and that checks and balances are in place to make sure that the answers reflect what is best for the creation of long-term, sustainable value'. In contrast, a tight definition of corporate governance as was proposed by Shleifer and Vishny (1997 p. 737), who said that corporate governance deals with 'the ways in which suppliers of finance assure themselves of getting a return on their investments'; similarly, the Cadbury Committee of the Financial Aspect of Corporate Governance defined it as 'the system by which companies are directed and controlled' (Cadbury Committee 1992). These diverse definitions reflect the perspective of what corporate governance is likely to deal with and the areas it should overcome. These broad definitions capture not only the functions of companies' governance structures or organs but also the external environment, comprising social influences, government rules regulating firms, and capital and labour markets. While narrow definitions place corporate governance only as a matter of firms' businesses, including the internal structure and processes of running the companies.

Historically, the work of Berle and Means (1932) was believed to be the earliest study that underpins the research in corporate governance. As companies develop, the pattern that mostly follows is the increasingly burdensome load faced by owners to run the firm efficiently and effectively. Further, single owners are incapable of fulfilling the resources needed by the firm in a competitive environment. The solution most often preferred is hiring capable people to run the company on a daily basis, and inviting many people to invest and therefore share the ownership of the firm. This situation is known as agency relationship, which is defined as

> a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent (Jensen and Meckling 1976 p. 308).

Under owners-managers ownership there is an absence of need to control firms since the interests of owners are also the objectives of managers. However, once the owners decide to hire professional managers to run their companies the

problem of control or agency conflict automatically emerges. Berle and Means argued concisely:

> The separation of ownership from control produces a condition where the interest of owner and of ultimate manager may, and often do, diverge, and where many of the checks which formerly operated to limit the use of power disappear (1932 p. 7).

It can be seen that agency theory assumes that the agent is individualistic and has self-serving behaviours. To limit the divergences from their interests, principals employ several means, such as managerial incentive arrangements and direct monitoring by owners through boards of directors. According to Walsh and Seward (1990), shareholders as principals can choose either internal or external governance mechanisms in order to ensure that the managers' interests are in line with theirs. The internal governance mechanisms include a well-performing board and executive compensation, the latter of which brings interests of managers and shareholders into congruence. They also focus on ownership which has lead to active monitoring. The market for corporate control provides an external mechanism when the above internal mechanisms fail to operate.

Comparing the two types of mechanisms, however, Walsh and Seward argued that external control is less preferable to shareholders since acquisition, divestitures, and ownership amendments are more expensive for owners to bear. Accordingly, the two most prominent internal controls, namely executive compensation schemes and governance structure, are favourable. With regards tying the executive pay to performance, the results of research have been mixed and the debate is continuing. At one end of the continuum, Murphy (1985), and Coughlan and Schmidt (1985) concluded that executive compensations associated with shareholders wealth, while at the other end, Kerr and Bettis (1987) found no such relationship.

Subsequently, discussions relating to the second type of internal control were numerous, as cited in the following arguments. As one governance structure, ownership structure has been a subject of many empirical studies, and the results of these studies again have been mixed. Demsetz and Lehn (1985) analysed the impact of three ownership concentrations, namely (1) the percentage of the firm's outstanding common equity owned by the five largest shareholders; (2) the percentage of shares owned by the 20 largest shareholders and (3) Herfindahl ownership concentration on the performance of the firms. Using the mean value of

annual accounting profit after taxes as a percentage of the book value of equity as dependent variable, this research showed that there was no significant relationship between ownership concentration and accounting profit and especially no significant positive relationship. A similar result was shared by other studies; Cho (1998) who use insider ownership as a proxy of ownership structure found no evidence of supporting the notion that ownership structure influences corporate value; Loderer and Martin (1997), who utilised executive stock ownership to measure the structure of ownership, claimed that ownership does not improve performance in any appreciable way. In contrast, Thomsen and Pedersen (2000) reported that by dividing ownership into 5 categories (0-10%, 10-20%, 20-50%, 50-75%, and 75-100%) Market-to-Book Value is positively and significantly influenced by ownership of stock.

There were also interesting findings in the studies of ownership structure and performance; for instance, Chang (2003) showed that a firm's profitability and firm value affect the degree of its inside ownership but not vice versa; and Morck, Shleifer and Vishny (1988) claimed that a non-monotonic relationship between managerial ownership and Tobin's Q was evidenced in their empirical research.

Another form of governance structure is appointment of outsiders to become members of BOD. Theoretically, the existence of outsiders in board composition will increase the degree of independency compared to the board which comprises insiders only. Subsequently, outsiders are believed to contribute to the firm by making better decisions (Hermalin and Weisbach 2003), which in turn influence the performance of the firm. Interestingly, this prescribed-outside-board composition offered by agency theory has not been supported by many empirical findings, of which Mehran (1995), Klein (1998), and Bhagat and Black (1999) are examples who have reported that there is no noticeable relationship between the existence of outside board of directors and firm performance. On the contrary, Morck, Shleifer and Vishny (1988) found a non-monotonic relationship between outside board members and performance; performance increases as outsider board membership rises to 5%, decreases in the 5% to 25% range, and then increases after 25%. In sum, consensus is not easily obtained about the extent of the influence of governance structure on performance, either with respect to the increase of ownership by a board of directors or management, or the existence of outsiders on the board of directors.

It must be noted that most of the abovementioned studies were carried out in developed countries in which capital markets were functioning more efficiently than those of developing countries. Particularly in developing markets, large shareholders are very often involved in management tasks rather than serving as monitors of management duties. This situation leads to their suboptimal functioning in fulfilling duties assigned to them. To be best in performing the duties, each of them should stick to the job assigned to them as they stand: one is tasked with management of the company and the other is obliged to supervise the actions of managers. This inefficiency should be solved by relying on the external market or external mechanisms in the form of tender offers, going-private transactions such as LBOs and MBOs, mergers, and hostile tender offers (Walsh and Seward 1990). Unfortunately in the thin market in developing countries, such mechanisms have not occurred effectively as the last control of the divergence of interests between managers and shareholders. This was also Aguilera and Jackson's (2003) argument relating to the failure of agency theory to explain key differences across countries due to the fact that assumptions that worked well in developed markets did not hold in other markets.

2.4 Internal Corporate Governance

Banks (2004) defined internal corporate governance in terms of the duties that are performed by a company's governance structures or organs, including its board of directors, executive management, and independent control functions. He argued that in any national system, there are standards to be followed by boards of directors and executive management in running corporations. Theoretically, if these 'rules of the game' are sustained, the principals' interests will securely be maintained.

To date, the publications of corporate governance mechanisms are well documented. The most-cited references in the study of corporate governance are Berle and Means (1932), Jensen Meckling (1976), Alchian and Demsetz (1972), Fama (1980), and Williamson (1975), among may others. These scholars have argued that there are means of aligning the incentives of management with the incentives of shareholders through compensation contracts, debt covenants, companies' boards of directors, auditing, labour market, and capital market.

In contrast, the study of internal mechanisms of corporate governance, which is defined as the fulfilment of the duties of a company's board of directors, executive management and other organs is lacking. Obviously, thus defining the internal mechanism of corporate governance demands primary data that should be gathered from boards of directors and executives. In this regard, companies are largely unwilling to provide such information, and this barrier further inhibits the development of research in corporate governance. Nonetheless, research on corporate governance using primary data does exist. Pearce II and Zahra (1991), Zahra (1996), Zahra, Neubaum and Huse (2000), and Gill, Flynn, and Reissing (2005) to some extent used primary data in their studies of corporate governance. Daily, Dalton and Cannella (2003) believe that such data will enhance the understanding of the effectiveness of corporate governance, and they call it 'process-oriented data'. The potential value of this data has also been recognised by Forbes and Milliken, who stated that process-oriented data 'will enable researchers to better explain inconsistencies in past research on boards, to disentangle the contributions that multiple theoretical perspectives have to offer in explaining board dynamics, and to clarify the tradeoffs inherent in board design' (1999 p. 502).

In regard to other forms of internal corporate governance mechanisms, many publications have claimed that the M-Form or multidivisional structure has relationship with organisational performance. In this light, M-Form is positioned as internal structure (Thompson 1981); as internal organisation (Hill 1985); as unique structural framework and as an internal capital market in which resources and rewards are allocated (Williamson 1975). The above studies utilised archival data instead of primary data in their research. Critique to the above studies is well known, as the M-form organisation was unable to capture the correct picture of how internal mechanisms were taking place.

Despite the above perspective, there is no single model of corporate governance that can be applied to all countries. Governance mechanisms that rely on effective markets, and legal and regulatory systems, may not be applicable in countries where the assumptions of these mechanisms do not hold. These markets for corporate control demand well functioning markets, including capital markets, product markets, and labour markets (Fama 1980).

Looking at the unique characteristics of Indonesia in terms of a less developed and illiquid capital market, a relatively weak legal and regulatory

framework, weak enforcement of this legal and regulatory framework, less active market controls such as takeover and mergers, a highly concentrated family ownership, a higher debt ratio (Husnan 2000; Claessens, Djankov, and Lang 2000), doubtful quality of secondary data (Baird 2000), and the suspicious independency of boards of directors in internal control (Banks 2004; Tabalujan 2002), and taking into account the argument advanced by Banks (2004) relating to the duties of companies' governance structures or organs, this study will proceed with an effort to fill the gaps in the research of corporate governance by observing the internal corporate governance mechanisms. The argument advanced here is similar to that of Yoshimori (2005 pp. 455-456) who emphasises the importance of internal corporate governance research. He strongly argues that

> It may be high time that we looked more closely at internal governance mechanisms, instead trying to refine the external governance system, which is becoming increasingly complex and onerous while its contribution to corporate performance is not conclusively proven. This statement is not intended to dismiss external governance but stress more reliance on internal governance.

It is believed that the standard of internal corporate governance performed by companies' governance structures or organs needs to be studied thoroughly. Boards of directors, for instance, are tasked to 'scrutinize the highest decision makers' (Fama 1980, p. 294), or to be 'the ultimate control' (Mizruchi 1983, p. 433). The executives, on the other hand, were formally appointed to provide return that satisfies the owners. Duties of managing other people's money should be performed, or otherwise somebody else will carry them out.

The advantages of internal corporate governance mechanisms were emerged as there were difficulties in disentangling who takes responsibility for poor company performance. The debate surrounding this issue is to determine whether strategic choice developed by decision makers, or environment shapes the performance of an organisation (Astley and Van de Ven 1983). Those who believed that people significantly impact performance are becoming supporters of the resource-based view of the firm. Within this framework, developing resources, capabilities, and core competencies is a way of gaining competitive advantage (Helfat and Peteraf 2003; Peteraf 1993). An example of a supporter of the importance of environment in contributing to firms' performance can be seen in Porter's five forces industry structure. Here, the bargaining power of buyers, the bargaining power of suppliers, threats of substitutes, threats of new entrants, and intensity of rivalry determine the

profitability of the business (Porter 1980). Looking the answer is not straight forward since many and mostly unrealistic assumptions such as asymmetry of information, unbiased assessment provided by subordinates toward their executives, and time lag between effort of executives and company's outcome and the possible irreversibility of previous executives' decisions further complicate the debate (Walsh and Seward 1990). Thus, in turn, none of the answers satisfy either the confronting sides. On this regard, Walsh and Seward offered a solution by stating 'the difficulty of disentangling the effects of person and situation can be overcome by optimal construction of an ***internal corporate governance mechanism*** (1990 p. 426 emphasis added).

2.5 Organisational Performance

There is considerable debate relating to whatever the choice of performance approach in any organisational research. For many profit-oriented organisations, the rational goal approach – in particular financial performance – dominates the approach to measuring the performance of the companies. In this regard, assessments with accounting-based and market-based measures are in place. Profitability is the accounting-based measurement most often used, while stock market returns are broadly accepted as the market-based measurement (Glunk and Wilderom 1996). Notwithstanding the degree of reliability and accessibility of accounting-based measurement and the extent of comparability across various types of industries, critiques of using such measurement are: a lack of consistency in corporate accounting methods; a lack of standardisation in international accounting conventions; an orientation to the past; and a tendency to manipulate the numbers to create impressive results. In a similar vein, market-based measurement is not free from shortcomings, such as the assumption of a perfect market and a high percentage of unlisted firms. Further, as organisations are to fulfil the needs of various stakeholders (e.g. customers, suppliers, employees and the community), and not only shareholders, a rational goal approach has been challenged due its limitation of capturing only the interests of shareholders (Wilderom, Glunk, and Maslowski 2000).

As business organisations are becoming complex webs of relationship among various interest claimants (Atkinson, Waterhouse, and Wells 1997) and multiple and

partly conflicting goals exist within them, financial performance alone is no longer suitable as a performance measurement. It is for these reasons that multidimensional performance approaches, including nonfinancial or operational and perceptual performance indicators, have emerged (Wilderom, Glunk, and Maslowski 2000; Venkatraman and Ramanujam 1986). Under the term of operational performance, measures such as market share, new product introduction, product quality, marketing effectiveness, and manufacturing value-added are among others widely used in many organisational studies. In regard to perceived performance, Denison and Mishra (1995) and Huang (2003), for instance, asked respondents to compare their firm's performance relative to the performance of similar firms on the dimensions of profitability, sales growth, quality, employee satisfaction, new product development, budget achievement, market share and overall performance. Caution, however, should be taken as these later approaches (operational and perceptual) suffer the following weakness. If collecting from secondary sources, operational data may not be complete, as the various indicators required to develop requisite measures are absent, and if gathering from primary sources, operational data is likely to biased (Venkatraman and Ramanujam 1986). Similarly, perceived performance is not free from weaknesses, such as the influence of objective performance on the perception of respondents and/or the effect of respondent biases.

The above review suggests that no single measurement is adequate for judging the organisational performance. Each measure partly suffers from operational and conceptual problems, gives limited perspective and conflict with one and another (Doyle, 1994). From methodological perspective, one also needs to consider the unidimensionality and convergent validity of the organisational performance measurement. For example, it is possible to have one company experiencing high growth but at the same time its profitability is in the difficult situation – as experienced by many firms in embryonic and growth phase of life cycle. Uniting these measures into one construct or one latent variable could be problematic.

In regard to the topic of this study, numbers of culture–performance researchers have utilised accounting-based measures (Denison 1990; Denison and Mishra 1995; Kotter and Heskett 1992; Marcoulides and Heck 1993; Calori and Sarnin 1991). More specifically, Denison (1990) and Denison and Mishra (1995) utilised return on assets; Marcoulides and Heck (1993) used market share; and

Sorensen (2002) utilised liquidity. These studies confirmed the relationship of organisational culture and organisational performance. Among others, the study by Kotter and Heskett (1992) employed a market-based measure in the form of the yearly increase in stock prices. Meanwhile, perceived organisational performance has been used in many studies of organisational theory (Denison and Mishra 1995; Huang 2003; Wilderom and Van den Berg 2000). In this regard, Wilderom and Van den Berg (2000) measured the degree of improvement needed by a firm using the dimensions of efficiency, customer satisfaction, managerial behavior, professional behavior, service quality, contact with clients, position in the market, and reputation. According to the above studies, organisational culture influences perceived organisational performance. While Denison and Mishra (1995) and Huang (2003) asked the respondents about the weaknesses of their firms compared to competitors, Wilderom and Van den Berg (2000) asked about the things the organisation needs to improve. They argued that asking about the things an organisation needed to improve was better than asking about the weaknesses of the firm, since improvement is the language of most managers. For this reason, this study appointed the perceived performance measure developed by Wilderom and Van den Berg as its performance measure.

2.6 Organisational Culture and Organisational Performance

The relationship between organisational culture and organisational performance has a relatively long tradition in organisation studies. Hawthorne studies, research initiated by Mayo, can be considered as the first study relating to this topic. As organisations developed, there were many studies that attempted to examine the predictors of organisational performance, and one of the predictors was organisational culture.

Following the argument of a resource-based view of the firm, which claims that the firm is a collection of productive resources, this study argues that performance is attributable to resources within the firm. To be productive resources should be valuable, rare, inimitable, and nonsubstitutable (Barney 1986). Further, Carmeli and Tishler (2004) have asserted that organisational performance can be well explained by intangible organisational elements. A stronger claim was made by Hansen and Wernerfelt (1989, p. 406) who stated '…organisational factors explain about twice as much variance in profit rate as economic factors'.

In the early days, organisational culture was believed to have become the explanatory factor behind the excellent companies in the US (Deal and Kennedy 1982; Peters and Waterman 1982). Nowadays, the explanatory power of organisational culture is even more important in many organisational studies as 'intangible resources are more than tangible resources to produce a competitive advantage' (Hitt et al. 2001, p. 14). Organisational culture, as an intangible resource, was related to organisational performance in many previous empirical studies (Sorensen 2002; Petty et al. 1995; Denison 1990; Calori and Sarnin 1991; Gordon and DiTomaso 1992; Kotter and Heskett 1992; Marcoulides and Heck 1993; Denison and Mishra 1995; Wilderom and Van den Berg 1998; Sawner 2000). Studies on the culture–performance relationship showed that organisational culture was a predictor of organisational performance (Wilderom, Glunk, and Maslowski 2000). Specifically, Denison and Mishra (1995), using the four-traits culture model, these traits being involvement, consistency, adaptability, and mission, found support for the effect of these dimensions on firm performance. Using Structural Equation Modelling, Marcoulides and Heck (1993) demonstrated how an organisation's culture affects organisational performance. Further, using dimensions of teamwork, trust and credibility, performance and common goal, and organisational functioning, Petty et al. (1995) have proved the link between organisational culture and organisational performance. Later, Wilderom and Van den Berg (1998), and Wilderom and Van den Berg (2000), employing 5 dimensions, namely empowerment/autonomy, intergroup orientation/interdepartmental cooperation, improvement orientation, external orientation, and human-resource orientation lent support to the relationship of organisational culture and organisational performance. Likewise, Glunk (1999) argued that organisational practices that foster a proactive market orientation, a strong competitor orientation, and professional knowledge management, and combine these with satisfying reward practices for their personnel and competent top management, will have good chances of gaining a competitive advantage on multiple stakeholder performance domains. In accord with previous theoretical claims, this study proposes that organisational culture relates to organisational performance.

2.7 Organisational Culture and Internal Corporate Governance

Among others, the work of Deal and Kennedy (1982) and Peters and Waterman (1982) popularised the term organisational culture. The popularity of organisational culture literature during the 1980s appeared to be a response to the deteriorating performance of many US firms vis-a-vis their Japanese counterparts. The scholars looked for explanations of this decline by relying on culture as a major factor. Meanwhile, in recent deep studies (Weimer, and Semenov, cited in Hofstede (2004)), the focus on culture has shifted to the power it has on corporate governance, within which culture has become a powerful explanatory variable.

Contrary to the previous argument of the direct relationship between organisational culture and performance, the conceptual framework of this study also hypothesises that organisational culture does not directly relate to performance, but rather does so through internal corporate governance. Saffold III (1988, p. 546) argued that a

> … simple model for relating culture to performance no longer fits with the knowledge scholars have developed about the role culture plays in organisational analysis: a more sophisticated understanding of the tie between culture and organisational outcomes must be developed.

Saffold III implicitly acknowledged internal mechanisms which he called 'the performance-related cultural processes'; these were climate formation, behavior control, organisational learning, strategy formulation, social efficiency, and leadership, and they functioned as intermediary elements of the culture–performance link. Another study related culture to performance through an effort at quality improvement (Nahm, Vonderembse, and Koufteros 2004). Furthermore, Hofstede et al. (1990) claimed that organisational culture influences internal control by demonstrating structure, role expectations and job description, how to act on the job, how to solve problems, who makes decisions in various situations, how to think about and behave toward co-workers and supervisors, and industry norms and practices. This was also Schein's (1991, p. 15) view, namely that organisational culture 'provides group members with a way of giving meaning to their daily lives, setting guidelines and rules for how to behave, and most important reducing and containing the anxiety of dealing with an unpredictable and uncertain environment'.

In line with the above supportive empirical findings, Semenov (2000) compared the systems of corporate governance in industrialised western countries,

and asserted that culture scores explained the differences of corporate governance in seventeen western countries better than any of the other economic variables suggested in the literature. Licht (2001) followed this argument and revealed a cross-cultural theory of corporate governance systems based on cultural value dimensions relateing to shareholding structures and the regulation of self-dealing, insider trading, and disclosure. Notwithstanding the above strong arguments, caution should be taken as these studies were national in scope. As organisational culture–internal corporate governance studies are rarely undertaken, this study is proposed to fill the gap in the literature. The argument advanced here is similar to that of Schwarts and Davis (1981, p. 47) who put it, 'for better or worse, a corporate culture has a major impact on a company's ability to carry out objectives and plans…'

On the basis of the literature review, internal corporate governance will be measured using the following dimensions: duties of board of directors[7], duties of board of commissioners[8], duties of independent commissioners, duties of audit committee, duties of internal control group, and codes of conduct. The use of the above dimensions was referred to in the studies of Banks (2004) and the FCGI (2003), and the Code of Good Corporate Governance, which highlights the importance of the five actors (BOD, BOC, independent commissioners (IC), audit committee (AC) and internal control group (ICG)) and the availability of codes of conduct (COC) in enforcing control and accountability of the company (NCCG 2001). Banks (2004 pp. 8-9) claimed that the failure of many companies is characterised by the following:

a. unethical conduct within a company, where directors, executives, and/or employees exhibit poor judgment or behavior;
b. weak boards that can be influenced and cajoled by powerful (and often charismatic) chief executives, and a lack of the expertise to actively manage and challenge;
c. inattentive directors who fail to focus on issues of importance, and conflict-ridden directors who derive personal gain from their ties to executive management;

[7] Indonesian company law adopts a two-tier management structure comprising a board of directors and board of commissioners. Boards of directors are tasked with the management of the company, and their role is similar to that of executive management in western management structures.
[8] Boards of commissioners are tasked with supervising and advising the directors, and are similar to boards of directors in western management structures.

d. ineffective internal controls that cannot detect or prevent problems;
e. poor external 'checks and balances' (for example, regulators, auditors, capital market, legal framework) that are unable to set or enforce proper standards.

Given the above theoretical point of view, and a strong belief that the cultural facet has a considerable impact on the way managers manage their firms, this study posits the significant impact of organisational culture on internal corporate governance.

2.8 Internal Corporate Governance and Organisational Performance

The Cadbury Committee on Corporate Governance of the United Kingdom defined corporate governance as 'a set of rules that define the relationship between shareholders, managers, creditors, the government, employees and other internal and external stakeholders in respect to their rights and responsibilities, or the system by which companies are directed and controlled' (FCGI 2003). Since the beginning of the 1930s, experts have realised that the separation of ownership from control creates condition of interests' divergence between owners (principals) and managers (agents) (Berle and Means 1932). As most companies are no longer owned by equityholders, there should be controls by which the interests of managers are brought into line with the interests of the owners. Jensen and Meckling (1976) provided one solution by asserting that losses to the principal resulting from interest divergence may be restricted by enforcing a control structure upon the agent. Walsh and Seward (1990) argued that internal or organisationally-based mechanisms and external or market-based mechanisms would bring the interests of agents and principals into congruence.

Despite internal corporate governance being a key for safeguarding the interests of shareholders (Walsh and Seward 1990), few researchers have examined this topic in an Indonesian context (Lukviarman 2004; Nam and Nam 2004). Interestingly, when they have there have been mixed results, as Lukviarman (2004) claimed that controlling shareholders – one form of governance structure in Indonesia – did not improve shareholders' value, while Nam and Nam concluded that board effectiveness was significantly associated with performance. In particular,

Lukviarman acknowledged his study's limitations in terms of data, and measurement. Concerning this case, Indonesian external governance is very weak. Within a five year period (1992 - 1997) there were only 5 out of 40 acquisitions that happened outside family-controlled firms (Banks 2004); these featured no effective checks or controls from the market. Further, researching corporate governance in Indonesia using secondary data may yield unsatisfactory results due to the following: recommendations to create boards of commissioners and to appoint independent directors are executed – but on paper, the degree of independence can be questioned (Tabalujan 2002); disclosure has been weak (Banks 2004); and fraud and insider transactions have been common (Baird 2000). These bring the quality of secondary data into doubt. In regard to this, the Chairman of The Audit Board of The Republic of Indonesia – referring to a World Bank report – stated that the Indonesian Accounting System had contributed to the monetary crises of this country, due to its inability to produce reliable, transparent, and accountable reports (Nasution 2003). As reliable and valid data are essential in research measurement, and as there are limited publications on this topic, further innovative research is called for to provide fresh evidence of the relationship between internal corporate governance and performance. For this study, the use of primary data to examine the impact of internal corporate governance on organisational performance will overcome this problem. Analysing the above empirical findings, the study proposes that internal corporate governance relates to organisational performance.

2.9 An Overview of Corporate Governance in Indonesia

The evidence given by the World Bank, which explicitly concluded that poor corporate governance was becoming one of the main impetuses factor of the meltdown of several Asian countries (Baird 2000), has awakened corporations and governments to the importance of corporate governance principles. This is also the case in Indonesia, where the awareness and understanding of the importance of the implementation of good corporate governance principles in Indonesia just begun following the monetary crisis in 1997 (Herwidayatmo 2003).

In regard to corporate governance, the ADB showed that the following characteristics were reflective of the poor corporate governance in Asian countries: 1) concentrated ownership structure; 2) excessive government interventions; 3)

under-developed capital markets; and 4) the weak legal and regulatory framework for investor protection (Capulong et al. 2000). In a more specific context, Lukviarman (2001) observed the characteristics of companies in Indonesia, and found similar features in his study, namely 1) concentrated ownership of the firms by individuals or groups of shareholders; 2) pyramid ownership structures in the hands of small numbers of families; 3) appointment of family members as members of board or management's team; 4) ineffective supervisory role due to close relationship between owners and board; 5) the absence of market control since only small portions of shares are sold to public; 6) a high debt-to-equity ratio; 7) many banks which financed the companies were also owned by the same group of companies as were the borrowers. He argued that the aforementioned factors influence the implementation of corporate governance.

Reacting to poor corporate governance and believing that corporate governance is essential for promoting healthy economic growth, Indonesia has taken important steps since 1999 by establishing the National Committee for Corporate Governance (NCCG) through a ministerial decree No:*KEP*-10/*M.EKUIN*/08/1999. A year later, a revised decree was created through *KEP*-31/*M.EKUIN*/06/2000, and in 2004 a new decree was put in place through *KEP*-49/*M.EKON*/11/2004 and the name of the committee was changed to *Komite Nasional Kebijakan Corporate Governance* (National Committee for Corporate Governance (NCCG))[9]. The main task of the NCCG is strengthening, disseminating, and promoting good corporate governance principles, not only in the private sector but also in the public sector. In search of better-governed State Ownership Enterprises (SOEs), Minister of SOEs released a ministerial decree *Kep*-117/*M/MBU*/2002 about the implementation of the practice of good corporate governance among SOEs. It is becoming mandatory for SOEs to implement good corporate governance consistently and to use good corporate governance as an operational foundation.

Besides the NCCG, which was set up by the Government of Indonesia, the private sector is developing initiatives to help socialise corporate governance in Indonesia, namely the Forum for Corporate Governance in Indonesia (FCGI), Corporate Leadership Development in Indonesia (CLDI), the Indonesian Institute for Corporate Directorship (IICD), Indonesian Directors and Commissioners Initiative,

[9] Although in Bahasa Indonesia the name of the national committee was changed, the translation into English was still National Committee of Corporate Governance (NCCG).

the Indonesian Institute of Independent Commissioners, KADIN Corporate Governance Task Force, and The Indonesian Institute for Corporate Governance.[10]

Apart from the effort of Government and the attention of Non-Government Organisations (NGOs) as listed above, it is on the shoulder of companies to ensure that corporate governance is in place. As the General-Secretary of OECD highlighted in 1999 (OECD 1999 p. 7):

> While governments play a central role in shaping the legal, institutional and regulatory climate within which individual corporate governance systems are developed, the main responsibility lies with the private sector.

2.9.1 The National Committee of Corporate Governance (NCCG)

Since its establishment, the National Committee of Corporate Governance (NCCG) has developed a number of guidelines to support the implementation of corporate governance. In March 2001, the Code for Good Corporate Governance was published by this committee, followed by Good Corporate Governance Guidelines for Indonesian Banking in 2004, and Guidelines for Independent Commissioners and Effective Audit Committee in 2004. The following section provides an overview of these three guidelines.

2.9.1.1 The Code for Good Corporate Governance[11]

As one of the important instruments of good governance, the Code for Good Corporate Governance has the objective of becoming the reference point for a Model of Good Corporate Governance for the Indonesian Business Community. In its preamble it is stated that public companies, state-owned enterprises and companies utilising public funds or engaged in the business of managing public funds shall be the first to commence proper adherence to the principles of the Code. The purposes of the principles set forth in this Code are:

a. to maximise corporate and shareholder value by enhancing transparency, accountability, reliability, and fairness in order to strengthen companies

[10] Many of the initiatives can be assessed at the following website address:
www.fcgi.or.id
www.iicd.or,id
http://iicg.org

[11] The content of this section is extracted from Code for Good Corporate Governance Ref.#4.0, composed by The National Committee for Corporate Governance, 2001

competitive position both domestically and internationally, and to create a sound environment to support investment;

b. to encourage the management of the company to behave in a professional, transparent, and efficient manner, as well as optimising the use of and enhancing the independence of the *Dewan Komisaris* (The Board of Commissioners), the *Direksi* (The Boad of Managing Directors), and the GMOS (General Meeting of Shareholders); and

c. to encourage shareholders, members of the *Dewan Komisaris* and the *Direksi* to make decisions and to act with a strict sense of morality, in compliance with the prevailing regulations having the force of law, and in accordance with their social responsibility towards the various stakeholders and the protection of the environment.

The Code for Good Corporate Governance contains 13 parts, namely:

1. Shareholders

Under this part, the principle states that the rights of the shareholders shall be protected and, accordingly, shareholders shall be able to exercise their rights through reliance upon appropriate procedures that have been adopted by the company concerned, which procedures shall be required under applicable regulations having the force of law. In addition it mentions all shareholders shall be entitled to obtain a full explanation and accurate information concerning the procedures to be followed prior to and at the GMOS, in order to enable the shareholders to participate in the decision making regarding matters which may affect the existence of the company and the rights of the shareholders. Shareholders of the same kind of shares shall be treated equitably based on the principle that shareholders of the same kind of shares have equitable position in the company. Apart form those, the principle declares that the *Dewan Komisaris* should recommend to the GMOS the establishment of a Nomination and Renumeration committee.

2. *Dewan Komisaris* (The Board of Commissioners)

This principle states the *Dewan Komisaris* shall be responsible and shall have the authority to supervise the actions of the *Direksi*, and shall give advice to the *Direksi* when required. The principle also organises the composition of the *Dewan Komisaris* by stating that depending on the specific characteristics

of a company, at least 20% of the members of the *Dewan Komisaris* should fall under the category of outside members. Such members of the *Dewan Komisaris* shall be independent from the *Direksi* and controlling shareholders. Apart from the above principles, the *Dewan Komisaris* shall consider establishing from among their members certain committees to support the implementation of the tasks of the *Dewan Komisaris.* The following are a number of the *Dewan Komisaris'* duties in respect of which decision-making can be prepared by various committees: the Nomination Committee, Renumeration Committee, Insurance Committee, and Audit Committee.

3. *Direksi* (The Board of Managing Directors)

This principle states that the *Direksi* are charged with the overall management of the company. The *Direksi* shall be responsible for the implementation of their duties to the shareholders at the GMOS. Relating to the composition of the *Direksi*, it states, depending on the specific character of the company, at least 20% of the members of the *Direksi* should be "outside directors". Such members of the *Direksi* shall be independent from the *Dewan Komisaris* and the controlling shareholders.

4. Audit System.

Under this section, it is acknowledged that the external auditors shall be appointed by the General Meeting of Shareholders (GMOS) from candidates nominated by the Audit Committee. In addition, the *Dewan Komisaris* shall establish an Audit Committee comprised of certain members of the *Dewan Komisaris*.

5. Corporate Secretary

It is stated in this principle that depending on the specific characteristics of the company, it is recommended that the *Direksi* recommend a person as corporate secretary who should act as a liason officer and can be assigned to administer and maintain corporate documents, including but not limited to the Register of Shareholders, the Special Register and the Minutes of all meeting of the *Direksi* and GMOS.

6. Stakeholders

In this section, it is admitted that the rights of stakeholders under prevailing regulations, having the force of law and/or pursuant to any contracts entered

into by the company with customers, suppliers, creditors and the surrounding community, shall be respected. Furthermore, stakeholders shall be afforded appropriate means of redress if there is evidence of infringements of their rights.

7. Disclosure

This principle declares that the company shall disclose material information through its Annual Reports and financial statements to shareholders and the relevant government authorities in accordance with the prevailing regulations, having the force of law, in a timely, accurate, understandable and objective manner.

8. Confidentiality

It is stated in this principle that the *Dewan Komisaris* and the *Direksi* are under an obligation of confidentiality to the company. Confidential information, which their members have obtained while acting as a member of the *Dewan Komisaris* or as members of the, or key executives, must remain confidential according to the prevailing regulations having the force of law.

9. Insider Information

Under this section, it is declared that members of the *Dewan Komisaris* and the *Direksi* holding shares in the company and, for public companies, any other "insiders" as meant in prevailing regulations having the force of law, shall not misuse such material information in relation to the company. Information concerning take-overs, mergers, and share repurchase programs is in general considered as insider information and the *Dewan Komisaris* and the *Direksi* and key executives of the companies concerned with the planning and implementation of these programs should afford fair treatment to all affected shareholders.

10. Business Ethics and Corruption

This principle mentions that members of the *Dewan Komisaris*, the *Direksi*, and all employees of the company shall never make or offer, directly, anything of value to a customer or government official to influence or reward an action, in accordance with the prevailing regulation having the force of law. A business courtesy, such as a gift, contribution or entertainment, should never be offered under circumstances that might create the appearance of an impropriety. The company should adopt a codification of ethical conduct,

which essentially is a statement of values; such Code should be expressed brieftly and clearly but be sufficiently detailed to give a clear direction to the behavior of those to whom it is directed.

11. Donations

As stated in this principle, it is inappropriate that any of the corporate funds or assets or profits that rightfully accrue to the shareholders be diverted to political donations. Political contributions by the company, or the use of any company's assets, to any political party or any legislative candidate, shall be carried out under the prevailing public election regulation, having the force of law. Donations to charities are acceptable within reason.

12. **Compliance with Health, Safety and Environmental Protection**

This principle of this part is the *Direksi* shall ensure that the company, its production and manufacturing facilities, plants, shops, and other company facilities, comply with applicable environmental and health regulations having the force of law. The *Direksi* shall take appropriate measures to prevent workplace injuries and illness. Employees shall be provided with a safe and healthy working environment. In carrying out this task, the *Direksi* shall consider evolving industry practices, regulatory, requirements and societal standards of care.

13. Equal Employment Opportunity

The principle in this part highlights that the *Direksi* shall use merit, qualifications and other job-related criteria as the sole basis for all employment-related decisions. The *Direksi* shall recruit, hire, train, compensate, promote and provide other conditions of employment without regard to a person's race, religion, sex, age, disability, or other characteristic protected by regulations having the force of law. The *Direksi* shall provide a work environment free of harassment of any kind based on diverse human characteristics and cultural backgrounds.

Having a code to become the reference point for a model of good corporate governance for the Indonesian business community, and seeking to transform into practice, the NCCG strove to realise the following targets (Daniri 2005):

a. Raising the awareness and implementation of good governance in Indonesia

b. Giving feedback to the government, initiatives, and other institutions in implementing good governance
c. Developing Guidelines, Standards, and Codes for the corporate sector
d. Establishing communication and education in order to increase the understanding of good governance
e. Establishing monitoring and assessment of the implementation of good governance in the corporate sector.

2.9.1.2 Code for Good Corporate Governance in Indonesian Banking Sector[12]

Relating to the implementation of Good Corporate Governance in the Banking sector, the Government of Indonesia ratified the Law of Banking, Law No. 10 of 1998, which consists of a Governance Structure, a Governance Process, and Governance Outcomes. Regulations relating to the Governance Structure comprise of: 1) Fit and Proper Test for the owners, controlling shareholders, Boards of Commissioners, Boards of Directors and other Executives who will run and/or are currently running the operational activity of the Bank. 2) Independency of Bank Caretaker, which highlights that Boards of Commissioners and Boards of Directors shall not have affiliation or financial relationships with other Commissioners and Directors or become controlling shareholders of other companies. 3) A Compliance Director should be elected to be responsible for the compliance of the bank to existing rules. There are three regulations related to Governance Process, namely: 1) Risk Management and Internal Control, which stated that banks were obliged to implement effective risk management by 31 December 2004. 2) The Bank of Indonesia, as the central bank demands banks, to formalise medium- and long-term business plans or a corporate plan and fiscal and annual working plans, with proposed objectives of having a well-articulated corporate strategy and values. 3) To preserve the healthiness of the banks, the central bank requires banks to have sound Capital, Asset Quality, Management, Earnings, Liquidity, and Sensitivity to Market Risks (CAMELS). Rules relating to Governance Outcomes can be classified into: 1) Transparency of Financial Condition of Bank and Enhancement of the role of External Auditor. 2) Transparency of supervision by Bank Indonesia, which

[12] This content of this section is extracted from *Pedoman Good Corporate Governance Perbankan Indonesia (*Indonesian Banking Sector Code) composed by The National Committee for Corporate Governance 2004.

highlights the intensive and special supervision of banks which experience problems of inadequate fulfilment of minimum capital, maximum boundary credit allowance, non-performing loans, the level of healthiness of the banks, risk profile and liquidity.

2.6.1.3 Code for Independent Commissioner(s) and Code for the Establishment of Audit Committee[13]

A regulatory framework related to the implementation of corporate governance emerged alongside the awareness of the importance of corporate governance. In accordance with The Law on Limited Liability Company, Law No 1 of 1995, article 97, which states that a Board of Commissioners has the duty of supervising the policies of the Board of Directors in operating the company along with the duty of providing advice to the Board of Directors, The Jakarta Stock Exchange passed Jakarta Stock Exchange Director's decree No. *KEP*-315/*Bursa Efek* Jakarta/ 06-2000. This decree regulates the existence of independent commissioners. According to this decree, independent commissioners are defined as those who: 1) do not have any affiliation with controlling shareholders of the company; 2) do not have any affiliation with the Board of Managing Directors and/or the Board of Commissioners of the company; and 3) at the same time do not work as directors of other companies which have affiliation with the company. The compliance rate toward the decree of the JSX Director has been increasing, from 59.87% in 2001, out of 314 listed companies to 99.70% in 2005, out of 330 listed companies (Daniri 2005).

Relating to audit committees, the *Bapepam* (The Stock Exchange Supervisory Body) enacted circular letter No: *SE*-03/*PM*/2000 which recommended the listed companies and public companies have an audit committee, which has the task of helping The Board of Commissioners, by giving them professional opinions that are independent, in order to raise the quality of management's work, and to reduce the deviation of the management of the company. In line with idea of Bapepam, the JSX endorsed decree No. *KEP*-315/*BEJ*/06-2000, which states that in order to govern their company well, listed companies are obliged to have an audit committee in which its members should be at least three persons, one of them being an independent commissioner who would also become the chair of the audit committee.

[13] This content of this section is extracted from *Pedoman Komisaris Independen dan Pedoman Pembentukan Komite Audit yang Efektif*, composed by The National Committee for Corporate Governance 2004.

The tasks assigned to the audit committee are: supporting the establishment of an adequate internal control structure; raising the quality of disclosure and financial reporting; reviewing the area and the rightness of external audit, the fairness of the costs of the external audit and the independency and objectivity of the external auditor; and preparing designated roles and responsibilities of the audit committee during the book year, which are audited by the external auditor. As with the compliance of the existence of the *Dewan Komisaris* above, the percentage of listed companies which complied to the decree related to an audit committee is rising, from 14.65% out of 314 listed firms in 2001, to 98.18% out of 330 listed companies in 2005.

2.10 Corporate Governance (CG) in Western Countries

The root of corporate governance in western countries is mostly based on agency theory. As corporate governance 'deals with ways in which suppliers of finance to corporations assure themselves of getting a return on their investments' (Shleifer and Vishny 1997 p. 737), the issue of corporate governance emerges when the suppliers of finance (the owners or the shareholders of the company) hire other people (management team) to responsibly run the company on daily basis. This entails an agency relationship (Jensen and Meckling 1976) which may result agency conflict (Berle and Means 1932), which the interests of both parties diverge. In this regard, the existence of a Board of Directors is very important, creating a link between shareholders and managers and thus playing an important role in corporate governance. In discussing CG in western countries the inclusion of the three statutory bodies — namely the Board of Directors, executive management, and shareholders — is therefore required. Further, as there are two broad types of corporate governance model in western countries — the Anglo-American and the Continental European —, and as the US and Germany represent these two models and are mostly referred to in discussion about the two models, this discussion will be directed to those countries.

In general, the US corporate governance system is characterised as a market-based system in which the capital market is very liquid, company ownership is diffused, the market for corporate control is relatively strong, and boards of directors are usually dominated by outsiders (Kaplan 1997). By contrast, Kaplan has

highlighted the characteristics of Germany's relationship-oriented corporate governance system, in which the capital market is relatively illiquid, company ownership is concentrated, the external market for corporate control is small, and boards of directors are dominated by banks, large corporate shareholders, and others that are intercorporately related.

In regard to ownership, La Porta, Lopez-de-Silanes, and Shleifer (1999), who thoroughly examined the ownership structure of large corporations in 27 wealthy economies, build an ownership index[14] and concluded that:

a. Compare to Germany, US companies with a 'Widely Held' index, close to 1, were less likely to have controlling shareholders.
b. With a 'Widely Held Financial' index of 0.25, German companies were more likely to have financial companies as controlling shareholders.
c. Having a 'State' index of 0.30, states (domestic or foreign) were more likely to have ownership in German companies than in US firms.
d. With a 'Family' index of 0.20, ownership by person was more common in US companies than in German firms.

The results confirm the notion that ownership structure in the US was unconcentrated, and distributed widely among many individual investors, while companies' ownership in Germany tended to be more concentrated at a lower scale, in the hands of financial institutions and states.

Assessing shareholder rights, La Porta et al. (1998) gathered a comprehensive sample consisting of 49 countries from Europe, North and South America, Africa, Asia, and Australia. In doing so, multiple measures of shareholder protection were applied. When an index score was equal to 1, it meant that the stated index was regulated by law in the corresponding country. Among of the indices are:

a. Proxy by Mail Allowed
b. Shares Not Blocked before Meeting
c. Cumulative Voting / Proportional Representation

[14] The Comprehensive Index can be seen in pages 478-480 of the cited reference. In this section, only corresponding indices are applied:

Widely Held:	Equals 1 if there is no controlling shareholder, and zero otherwise.
Widely Held Financial:	Equals 1 if a widely held financial company is the controlling shareholder, and zero otherwise.
State:	Equals 1 if the (domestic or foreign) State is the controlling shareholder, and zero otherwise.
Family:	Equals 1 if a person is the controlling shareholder, and zero otherwise.

d. Oppressed Minority

e. Preemptive Right to New Issues

f. One Share-One Vote

g. Percentage of Share Capital to Call an Extraordinary Shareholder Meeting[15]

h. Anti-director Rights[16]

While there was investors' protection in Law in the first four dimensions above in the US there was none in German Law. The only visible shareholders' protection in Germany was in the Percentage of Share Capital to Call an Extraordinary Shareholder Meeting. Here, the percentage of share capital needed to call an extraordinary meeting was only .05 lower than that required in the US (=0.10). Based on their findings, it can be concluded that shareholder protections in the US are much better compared to Germany. This is in accordance with Shleifer (2006) who argues that under Anglo-American common law the principles-based concept is more difficult to circumvent than the alternative rules-based system, which in turn means shareholders' rights are better protected.

In regard to the board system, Germany has adopted a two-tier and the US has implemented a one-tier system. Under a two-tier board system, German companies employ both a supervisory board (*Aufsichtsrat*) which monitors and a management board (*Vorstand*) which leads the firm and sets strategy (Davies 2006). Within the supervisory board there is also an employees' representative. As a result, the supervisory boards of German firms have wider roles; firstly, they have to monitor the management in order to protect shareholders' interests; and secondly, they have to nurture their networking-relationship with the labour force. From the shareholders' perspective, this condition is less than ideal. Hopt (1998), for instance, highlighted the weaknesses of this system, stating that a large board contributes to the ineffectiveness of the board as a consequence of inadequate information flows, either form the management board to the supervisory board, and from the chairman to other board members, and also infrequent meetings. Under this system, it is likely that the management board gains a stronger role than the supervisory board.

[15] In this index, instead of using the number 1 to capture the availability of shareholder protection in the Law, the cited reference used percentage of share capital needed to call an extraordinary shareholders' meeting. The higher the percentage, the harder it is for a minority to organize a meeting to challenge or oust the management.

[16] Aggregation of the previous indices.

The so-called ‘shareholder supremacy’ (Farrar 2005 p. 463) is a one-tier board system. This system has commonly been adopted by UK and US companies. Under the one-tier system, the main task of the board of directors is to safeguard the investments of shareholders in the company from potential managerial opportunism and incompetence (Baysinger and Hoskisson 1990). In doing so, boards of directors are exercising the functions of monitoring and disciplining management on behalf of shareholders, and helping to define corporate strategy and coach its implementation (Lipton 2006). The degree of boards of directors’ involvement in protecting the interest of shareholders, however, depends on their attributes. Outside directors, for instance, are believed to have more independency than insiders, and suggest strong monitoring for the benefit of shareholders (Beaty and Zajaz 1994; Kaplan 2006). Outside directors’ stockholding also has been considered to be beneficial to shareholders, as giving them equity ownership in a firm aligns their interests with those of shareholders (Finkelstein and D'Aveni 1994). Another attribute of boards of directors that is associated with safeguarding the interests of shareholders is board size. More streamlined boards has been believed to operate efficiently, and therefore, monitor more effectively (Yermack 1996). The trend of increasingly seeking to protect towards shareholders from potential managerial opportunism and incompetence was documented by Huson, Parrino, and Starks (2001), who stated hat boards of directors are increasingly likely to fire CEO, and also hire CEOs from outside of the firm.

2.11 Summary

The literature reviewed in this chapter indicates that organisational culture, internal corporate governance, and organisational performance studies have mostly been performed in organisations in western countries. It is essential to know the generalisability of these research findings and their applicability in different contexts.

The literature provides two perspectives of organisational culture – organisational culture as values and organisational culture as practices. These two correspond to methodological approaches. The discussion of the importance of internal corporate governance measures was begun in this chapter. This was based on the duties of companies’ governance structures or organs in Indonesia. Similarly, the

reason for the use of perceptual organisational performance instead of archival data of organisational performance was also reviewed in this chapter.

Though organisational culture has been examined and related to organisational performance, few researchers have examined this topic in Indonesia. Further, the conceptualisation of organisational culture needs further assessment. That is to say that an insufficiently measured organisational culture construct suffices to guarantee the conceptual development of it, as highlighted in detail in this chapter.

Placing organisational culture as the residual factor of corporate governance research in general and internal corporate governance in particular should be responded to by accommodating this culture into internal corporate governance research. Past studies have included national culture instead of organisational culture into their research of internal corporate governance. Considering the importance of a firm-level approach to internal corporate governance and the acknowledgment that a country-wide approach unlikely touches the bottom line of internal corporate governance, this study emphases developing a conceptual framework relating organisational culture and internal corporate governance.

By the same token, although past research reveals the relationship between internal corporate governance and organisational performance, few scholars have examined the two-tier system of corporate governance, as is the case in Indonesia. Hence, a review of the relationship of these variables is discussed in this chapter.

This chapter also presents an overview of the uniqueness of the corporate governance system in Indonesia, including the law and regulations that function as the umbrella of the implementation of corporate governance practices. Then, in the latter part of this chapter, an overview of the corporate governance system and practices in western countries – particularly in the US and Germany – was also discussed.

Chapter 3: Research Paradigm, Research Model and Hypotheses Development

3.1 Introduction

This chapter presents the research paradigm within organisational theory that guided the study, the research model that was built upon the literature review, a definition of terms that used for the research, and the hypotheses development process of this study. In the first part, there is a discussion relating to the two main schools of thought, namely qualitative and quantitative paradigms, which are common among researchers. Next, the chapter presents a research model based on the literature of organisational culture, internal corporate governance, and organisational performance. In the third part, this chapter presents definitions of the terms that are used in this research. Finally, the fourth part provides the process of developing the hypotheses in relation to the research model utilised.

3.2 Research Paradigm

Generally, for any academic inquiry the stages that have to be taken are (1) determining the form and nature of reality, (2) determining the nature of the relationship between one who wants to investigate and what can be investigated, and (3) determining the methodology to investigate (Guba and Lincoln 1994). Guba and Lincoln called the first stage a paradigm, which they defined as:

> (A) set of basic beliefs (metaphysics) that deals with ultimate or first principles. It represents a *worldview* that defines, for its holder, the nature of the world, the individual's place in it, and the range of possible relationships to that world and its part, as for example, cosmologies and theologies do (1994, p. 107).

In dealing with the first stage, to date investigators or inquirers have had many approaches available when conducting research. Creswell (2003), for instance, named four alternative knowledge claims or paradigms: post-positivism, constructivism, advocacy/participatory, and pragmatism. Meanwhile, Lincoln and Guba (2000) claimed that there are five basic beliefs of inquiry that are available to researchers, namely positivism, postpositivism, critical theory, constructivism, and participatory. This last approach extends the work of Guba and Lincoln's previous study, which named only the first four (1994). It seems that the debate relating to the

number and the types of inquiry will continue. However, regardless of the above perspective, one cannot ignore the dominance of the qualitative and quantitative approaches.

Qualitative research refers to social and behavioural research based on unobtrusive field observations, which can be examined without using numbers or statistics (Kerlinger and Lee 2000). Here, the focus of research is the 'processes' of interaction among participants, which are explored by visiting their context and gathering information personally (Creswell 2003, 2002), which investigators try to make sense of and use to interpret the meaning of their findings (Denzin and Lincoln 2000). This paradigm leads to the second stage of this school of thought, which believes that what exists is mind-dependent, which in turn leads to the impossibility of separating what is investigated from the process of investigation. As an idealist paradigm, qualitative research sees reality as ontogically 'becoming', which leads to gaining an understanding of the phenomena (Smith 1983). Assuming the 'subject – subject relationship concept', interpretive epistemology acknowledges that the researcher will be part of the research instrument in collecting and interpreting the information. The final stages represented the various methodologies within the qualitative approach which are inherent ethnography, grounded theory, case study, phenomenological research, and narrative research – among many others.

On the other hand, the aim of quantitative research is to determine the extent or quantity of some phenomenon in the form of numbers (Denzin and Lincoln 2000; Kerlinger and Lee 2000). Quantitative research can be experimental, in which intervention is allowed, or it can be correlational or survey based, in which case no intervention is permitted. Ontologically, this positivist school of thought sees reality as 'being', which leads the knower to objectively seek to explain and predict the relationship between, or the invariant succession of, objects and events (Smith 1983). This school of thought assumes that reality is apprehendable and exists independently of the knower. Assuming the 'subject – object relationship' (Smith 1983), empirical epistemology admits that researchers can isolate the object of research from themselves. In other words, as stated by Creswell (2003), the knowledge developed 'is based on careful observation and measurement of the objective reality that exists "out there" in the world'(p. 7). Objectivity is the essential aspect of quantitative paradigms, and for this reason attempting to be free from bias is paramount in methods of study that are employed. Accordingly, the use of

instruments which are unaffected by individual perceptual differences are viewed as the way to achieve an accurate reflection or measurement of an independently existing object. In explaining and predicting objectively the relationships that exist, a quantitative methodology based on equations and statistical modelling is employed. Looking for the truth, this realist stance posits that a statement will be judged true only if it corresponds to an independently existing reality, and classified false if it does not. Thus, absolute truth can never be found.

This study follows the quantitative approach, which includes a positivist ontology, empiricist epistemology, and quantitative methodology. It does so for the following reasons. First, the constructs under investigation are measurable and observable. Second, there are growing roles for quantitative measures as means of assessing the less abstract levels of constructs used in this study (see, for examples, Ashkanasy, Broadfoot, and Falkus 2000; Wilderom, Glunk, and Maslowski 2000).

3.3 Research Model

Illustrated in Figure 1, the research model is developed from past studies relating to organisational culture, internal corporate governance and performance. The organisational culture is developed as a second-order construct that is reflected by five first-order constructs, namely *autonomy, external orientation, inter-department coordination, human resource management*, and *improvement orientation*. The internal corporate governance construct is also a second-order construct that is reflected by six first-order constructs, which are duties of *boards of commissioners*, duties of *independent commissioners*, duties of *audit committees*, *duties of boards of directors*, duties of *internal control groups*, and *codes of conduct*. The oganisational performance is a first-order construct that is reflected by several indicators. The relationship between the constructs is discussed in the following section.

3.3.1 Organisational Culture-Organisational Performance Relationship

Following the argument of a resource-based view of the firm, which claims that the firm is a collection of productive resources, this study argues that performance is attributable to resources within the firm. To be productive resources should be valuable, rare, inimitable, and nonsubstitutable (Barney 1986). Further, Carmeli and Tishler (2004) have asserted that organisational performance can be well explained

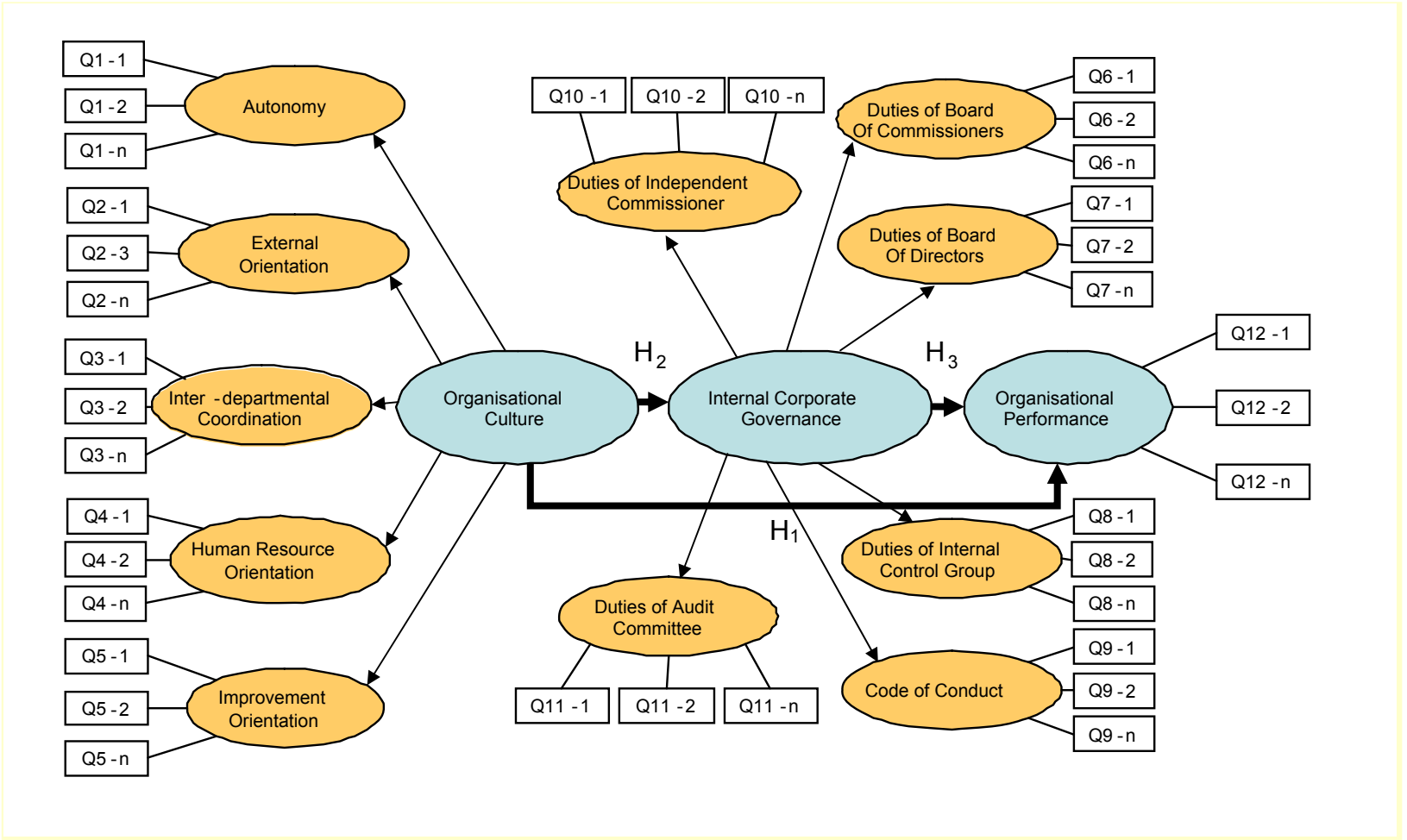

Figure 3.1: Research Model Organisational Culture, Internal Corporate Governance, and Organisational Performance

by intangible organisational elements. A stronger claim was made by Hansen and Wernerfelt (1989, p. 406) who stated '…organisational factors explain about twice as much variance in profit rate as economic factors'.

Prior studies on the culture – performance relationship showed that organisational culture was a predictor of organisational performance (Wilderom, Glunk, and Maslowski 2000). Denison (1990) and Denison and Mishra (1995) provided other empirical evidence that cultural dimensions were positively related to organisational performance. Using Structural Equation Modelling, Marcoulides and Heck (1993) demonstrated how an organisation's culture affects organisational performance. In addition, the study carried out by Wilderom and Van den Berg (2000) verified the culture – performance relationship. Following the previous theoretical claims, the proposed research model argues that organisational culture is antecedent to organisational performance.

3.3.2 Organisational Culture-Internal Corporate Governance Relationship

Apart from discussion in the above section, interestingly, organisational culture also was seen not to be directly related to organisational performance, as Saffold III (1988, p. 546) argued that a

> … a simple model for relating culture to performance no longer fits with the knowledge scholars have developed about the role culture plays in organisational analysis: a more sophisticated understanding of the tie between culture and organisational outcomes must be developed.

In short, Saffold III believed that organisational culture related to organisational performance via behaviour control. Another study has related culture to performance through efforts at quality improvement (Nahm, Vonderembse, and Koufteros 2004). Furthermore, Hofstede et al. (1990) claimed that organisational culture influences internal control by demonstrating structure, role expectations and job description, how to act on the job, how to solve problems, who makes decisions in various situations, how to think about and behave toward co-workers and supervisors, and industry norms and practices. It seems that the term 'internal control' offered by Hofstede above captures the mechanisms within a firm to govern it in a way that satisfies those who have relations with the firm. In line with the above supportive empirical findings, Semenov (cited in Hofstede 2004) asserted that culture scores explained the differences of corporate governance in seventeen western countries

better than any of the other economic variables suggested in the literature. Given the above theoretical point of view, and a strong belief that the cultural facet has a considerable impact on the way managers manage their firms, the proposed research model posits the impact of organisational culture on internal corporate governance, where internal corporate governance represents behaviour control, and internal control within the firm.

3.3.3 Internal Corporate Governance-Organisational Performance Relationship

The impact of corporate governance and performance has been well documented in previous empirical studies. External and internal control, as mechanisms of corporate governance, will keep the managers' self-serving behavior in check and guard the shareholders' interests in the objectives that are given priority by managers (Walsh and Seward 1990). External mechanisms are applied in the form of tender offers, going-private transactions such as LBOs and MBOs, mergers, and hostile tender offers. Discussing this external mechanism in the case of Indonesia provides an exception, as within a five year period (1992 to 1997) there were only 5 out of 40 acquisitions that happened outside family-controlled firms (Banks 2004); these featured no effective checks or controls from the market. Regarding internal control, scholars unequivocally assume that ownership structure influences firm performance (Gedajlovic and Shapiro 1998; Jensen and Meckling 1976; Shleifer and Vishny 1986). Further, assessing the independent boards of directors, Hill and Snell (1988) provide evidence that the greater the number of directors from outside of the firm, the greater the profitability of the firm. Complementary, utilising M-structure as a proxy of internal control or internal corporate governance, Hill (1985) found a relationship between internal corporate governance and performance.

In essence, internal control provides mechanisms by which the interests of managers are brought into line with the interests of the owners. Internal control who monitors the management of the company was in fact exercising behavioural control. Saffold III (1988) was among the first scholars who believed that behaviour control positively affected company performance. In line with the previous arguments, internal corporate governance, who are tasked to 'scrutinize the highest decision makers' (Mizruchi 1983, p. 433) or to be 'the ultimate control' (Hill and Snell 1988), safeguard the organisational performance. Considering the previous claims, the

proposed research model posits the impact of internal corporate governance on organisational performance.

3.3.4 Other Issues in Modelling the Research

In modelling this research, several issues have been raised and discussed in this section. Firstly, in researching organisational culture, there are constraints of culture that could be considered. First, as organisational culture is a based theme, it can be viewed as values as well as practices. Researching both perspectives in one snapshot study is unlikely to be carried out as it requires a considerable effort, time and cost. Only a practices perspective is applied in this study. Second, recognising that culture is adaptive in some ways, but maladaptive in other ways (Ramsey, 2007), single measurement of this concept in this study is unlikely to reveal such natures of culture.

Secondly, there could be a bunch of variables attributable to performance (and leadership can be one of them). However, it must be noted that the majority research on leadership categorised as 'trait' studies, concentrating on identifying the personality traits which characterised successful leaders. Trait theories on leadership assume that successful leaders are born and that they have certain innate qualities which distinguish them from non-leaders. The 'leadership trait' is similar to the 'cultural trait' as the focus is not on the behaviour and situational factor. Considering that a similar approach has to be taken, the inclusion of leadership variable in the research model requires the same treatment as applied to organisational culture. Due to the nature of snapshot study is unlikely to reveal such traits of leader, the inclusion of leadership variable in the research model is hardly justified.

Thirdly, in regard to organisational culture and leadership, Schein (1992) observed that these two concepts are intertwined – in the context of organisational life cycle. Bass and Avolio (1993) also emphasised that the relationship between the two concepts represents an ongoing interplay in which the leader shape the culture and is in turn shaped by the resulting culture. Thus, in order to balance the approaches in researching the topic of this research, decision has to be taken in regard to the snapshot study the research is carried out. This suggests that inclusion of leadership variable in the model could improperly portray the leadership concept as the interplay between leadership and organisational culture requires longitudinal study.

3.3.5 Operationalisation of the Constructs

For the purpose of the study, organisational culture will be operationalised with five subconstructs, namely *autonomy, external orientation, inter-department coordination, human resource management*, and *improvement orientation*. In this regard, the study adapted and modified the previous studies relating to organisational culture, particularly the works of Wilderom and Van den Berg (2000), Nahm, Vonderembse and Koufteros (2004), Denison (1990), and Hofstede et al. (1990). The last two studies above were believed to have had a widespread influence in the thinking about organisational culture in the last decade; however, the heavy reliance on these studies could hinder the current development of organisational culture studies. It is for this reason that the current study also refers to the work of the *first* two empirical studies above, as well as the *last* two. The mix of items in the five constructs of organisational culture developed by this study was tested in two pilot studies performed in an earlier stage of this research.

In terms of internal corporate governance constructs, six subconstructs will be utilised to capture the specific mechanisms and actions taken by individual firms to enforce control and accountability. These subconstructs are duties of *boards of commissioners*, duties of *independent commissioners*, duties of *audit committees*, *duties of boards of directors*, duties of *internal control groups*, and *codes of conduct*. As the literature of internal corporate governance is under-developed, the study developed these above subconstructs through a series of interviews and tests. Earlier in this work, a review of the literature of internal corporate governance in western countries was used as a starting point to discover what internal corporate governance is about; this was followed by study of the Indonesian literature relating to this construct as the study will be carried out in Indonesia. In this regard, the Indonesian Company Law (Tabalujan 1997), Code for Good Corporate Governance (NCCG 2001), Guidelines of Effective Independent Commissioners and Audit Committee (NCCG 2004), Good Corporate Governance (Daniri 2005), among many others, were the main sources used in developing research constructs. The next stages were interviews with several experts relating to these constructs and testing of the constructs in two pilot studies.

In terms of the organisational performance construct, the research model utilised the perception of organisational members toward the degree of improvement

needed for their company in the eight items, which were efficiency, customer satisfaction, managerial behaviour, professional behaviour, service quality, contact with clients, position in the market, and reputation. This construct was initially developed by Wilderom and Van den Berg (2000) and Wilderom, Glunk, and Maslowski (2000).

3.4 Definition of Terms

In this study the terms used are defined as follows:

a. Organisational Culture: '…particular ways of conducting organisational functions that have evolved over time under the influence of an organisation's history, people, interests, and actions and that have become institutionalised in the organisation' (Kostova 1999 p. 309). This definition captures the perception of organisational work practices within an organisation.

b. Autonomy: 'Pertains to the degree to which employees have decision latitude at the job level' (Van den Berg and Wilderom 2004, p. 574).

c. External Orientation: The degree to which the organisation is responsive to the needs of its customers, and the degree of its response toward the actions of other organisations in the market (Van den Berg and Wilderom 2004; O'Reilly, Chatman, and Cadwell 1991; Hofstede et al. 1990; Gordon and DiTomaso 1992; Ashkanasy, Broadfoot, and Falkus 2000).

d. Inter-departmental Coordination: The process by which inter-departmental communication and cooperation is perceived to be performed under circumstances of horizontal differentiation within modern organisational structures (Denison and Mishra 1995; Gordon and DiTomaso 1992; Marcoulides and Heck 1993; O'Reilly, Chatman, and Cadwell 1991; Van den Berg and Wilderom 2004).

e. Human Resource Orientation: The degree to which organisational admiration of and concern toward its employees is perceive to be practiced within a company (Hofstede et al. 1990; O'Reilly, Chatman, and Cadwell 1991; Marcoulides and Heck 1993; Van Muijen et al. 1999).

f. Improvement Orientation: The extent to which an organisation is eager to encourage employees to become innovative and creative (Ashkanasy, Broadfoot, and Falkus 2000; Denison 1990; Gordon and DiTomaso 1992;

Hofstede et al. 1990; O'Reilly, Chatman, and Cadwell 1991; Van Muijen et al. 1999).

g. Internal Corporate Governance: The specific mechanisms and actions taken by individual firms to enforce control and accountability which are centred on boards of commissioners, independent commissioners, audit committees, executive management, and internal control groups, within which their activities are reinforced by codes of conduct that are intended to promote proper behaviour.

h. Duties of Board of Commissioners (BOC): The extent to which the BOC fulfils its duties of supervising the policies/actions of the BOD in operating the company, along with the duty of providing advice to BOD (NCCG 2001; Tabalujan 1997).

i. Duties of Independent Commissioners (IC): The degree to which Independent Commissioners fulfil their duties of proactively supporting the BOC in supervising and giving advice to BOD (NCCG 2004).

j. Duties of Audit Committee (AC): The extent to which the Audit Committees fulfils its duties of auditing and controlling the process of financial disclosure and reporting, and internal control (Daniri 2005; NCCG 2004, 2001)

k. Duties of Boards of Directors (BOD) or Executive Management: The degree to which BOD fulfils its duties of the overall management of the company and are responsible for the implementation of their duties to shareholders at general meetings of shareholders (NCCG 2001; Tabalujan 1997).

l. Duties of Internal Control (ICG): The degree to which the Internal Control group is fulfils its duties of safeguarding the company from financial and legal manipulation, and identifying and managing the risk in order to maximise the utilisation of company resources ethically, effectively and efficiently (NCCG 2004; Daniri 2005).

m. Codes of Conduct: The degree to which codes of conduct are perceived as being implemented within a company. Such codes of conduct capture the ethical guidelines and norms of the company and act as standards of acting and behaving when dealing with others (NCCG 2004; Banks 2004).

n. Organisational Performance: The degree of improvement needed by the organisation in the following dimensions: *efficiency, customer satisfaction, managerial behaviour, professional behaviour, service quality, contact with*

clients, position in the market, and *reputation* (Wilderom and Van den Berg 2000).

3.5 Hypotheses Development

Most previous empirical studies that have attempted to relate organisational culture and organisational outcomes have pursued culture traits and taken a strong culture approach. Usually, traits of organisational culture were developed through qualitative studies within which traits were identified, and in subsequent phases quantitative studies of exploratory and correlational analysis were performed. In relation to the strength of culture, an analysis of agreement among members of an organisation toward a set of norms and values was the indicator of the magnitude of a strong culture. This approach claimed that a particular culture or the degree of cultural strength caused performance to increase. For example, Denison and Mishra (1995), using the four-traits culture model — these being involvement, consistency, adaptability, and mission — found support for the effect of these dimensions on firm performance. In a similar vein, Deal and Kennedy (1982) and Peters and Waterman (1982) asserted that strong culture was the driving force behind the excellent companies in the US.

In recent empirical research, organisational culture has no longer been defined as traits or values, rather it has been perceived as organisational practices (Petty et al. 1995; Wilderom and Van den Berg 1998, 2000). Specifically, organisational culture has been defined as the 'collective wisdom within an organisation about how things can best be done' (Wilderom and Van den Berg 2005, p. 6). Petty et al. (1995), for example, using the dimensions of teamwork, trust and credibility, performance and common goals, and organisational functioning, proved the link between organisational culture and organisational performance. Likewise, Glunk (1999) argued that organisational practices that foster a proactive market orientation, a strong competitor orientation, and professional knowledge management, and combine these with satisfying reward practices for their personnel and competent top management, would have good chances of gaining an organisation competitive advantages in multiple stakeholder performance domains. Proposing a theoretical model of 'how culture works', Cooke and Szumal (2000) also argued that operating culture — and not espoused values — has a direct relationship

to organisational outcomes. In accordance with the above claims, Wilderom and Van den Berg (2000) employed 5 dimensions of organisational culture, namely *empowerment/autonomy*, *intergroup orientation/interdepartmental cooperation*, *improvement orientation*, *external orientation*, and *human-resource orientation*, which lent support to the relationship of organisational culture and organisational performance.

In regard to the dimensions highlighted by Wilderom and Van den Berg (2000), Kirkman and Rosen (1999), using two *Fortune 50* organisations and two smaller companies, reported that the team *empowerment/autonomy* dimension was significantly related to productivity. The more empowered the team the more productive the team, compared to the less empowered team. At an individual level, supporting evidence was found in the study by Spreitzer et al. (1997), among many others. They claimed that several dimensions of psychological empowerment – namely meaning, competence, self-determination, and impact – were associated with effectiveness. A more recent study by Mathieu, Gilson and Ruddy (2006) also reported the positive relationship between empowerment and performance.

The *external orientation* dimension was mostly associated with market orientation in many studies (see e.g. Kohli and Jaworski 1990; Wood, Bhuian, and Kiecker 2000; Narver and Slater 1990). As was the case in this study, *external orientation* was reflected by observed variables which capture market intelligence generation of companies. These consist of activities to gather, monitor, and analyse not only current and future needs of customers, but also factors outside of them, including government, and most importantly the competitive actions of current and potential competitors. Kahn (2001), surveying profit-oriented firms, asserted that a market orientation correlated to performance. In a similar vein, a study of not-for-profit hospitals by Wood, Bhuian, and Kiecker (2000) confirmed the positive association between market orientation and performance.

In regard to *inter-departmental coordination*, research has documented its association with performance. Specifically, Kingman-Brundage, George, and Bowen (1995) stated that the greater the emphasis on coordinating departmental activities to facilitate interaction, the greater the value to customers. This finding was in accordance with the study of Kahn (2001), and that of Ellinger, Daugherty, and Keller (2000), which found the positive effect of interdepartmental integration on performance.

For a long time, the dimension of *human resource management* has been associated with performance. For example, Huselid (1995) and Huselid, Jackson, and Schuler (1997) claimed the positive impact of *human resource management* on firm performance. In a more recent study, this positive relationship was also revealed (Stavrou, Charalambous, and Spiliotis 2007).

Finally, the positive effect of *improvement orientation* dimension on performance was supported by the studies of Nahm, Vonderembse, and Koufteros (2004) and Fleming, Coffman, and Harter (2005). Thus, the use of perception of organisational practice to measure organisational culture has valuable support form the studies cited above.

Given the above empirical arguments, this study proposes the following hypothesis:

Hypothesis 1: Organisational culture (that emphasises a higher degree of autonomy, external orientation, interdepartmental coordination, human resource orientation, and improvement orientation) is positively related to organisational performance.

Comparing the systems of corporate governance within industrialised western countries, Semenov (2000) asserts that the best explanation of differences in governance mechanisms is provided by culture. Licht (2001) followed this argument and reveals that cross-cultural theories of corporate governance systems based on cultural value dimensions relate to shareholding structures and the regulation of self-dealing, insider trading, and disclosure. Notwithstanding these two strong arguments, caution should be taken as they approach their studies at a national level.

At the micro or organisational level of study, empirical studies relating organisational culture and corporate governance, and internal corporate governance in particular are rarely undertaken. Internal corporate governance, which was defined as the specific mechanisms and actions taken by individual firms to enforce control and accountability — and which centred on *boards of commissioners*, *independent commissioners, audit committees*, *boards of directors*, and *internal control groups*, whose activities are reinforced by *codes of conduct* that are intended to promote proper behaviour — was found to be mechanism within firm. This mechanism rarely stands in isolation, but rather exists because of the cultures that put it to works. Thus, the fulfilment of duties of each of company organ that put internal corporate

governance in place was triggered by culture. Saffold III (1988) was among the first to reveal this phenomenon by implicitly acknowledging internal mechanisms which he called 'the performance-related cultural processes', these being climate formation, behaviour control, organisational learning, strategy formulation, social efficiency, and leadership, as intermediary elements of the culture-performance link. The argument advanced here is similar to that of Schwarts and Davis (1981, p. 47) who put it, 'for better or worse, a corporate culture has a major impact on a company's ability to carry out objectives and plans, especially when a company is shifting its strategic direction'. Following the above claims, Hofstede et al. (1990) specifically claim that organisational culture influences internal mechanism, namely structure, role expectations and job description, how to act on the job, how to solve problems, who makes decisions in various situations, how to think about and behave toward coworkers and supervisors, and industry norms and practices. It is also Schein's (1991, p. 15) view that organisational culture 'provides group members with a way of giving meaning to their daily lives, setting guidelines and rules for how to behave, and most importantly reducing and containing the anxiety of dealing with an unpredictable and uncertain environment'.

This study suggests that the organisational culture consists of five dimensions – *autonomy, external orientation, interdepartmental coordination, human resource management*, and *improvement orientation* – that act as triggers in the operationalisation of internal corporate governance. The dimension of *autonomy*, deals with the empowerment which was needed by company organs to fulfil their duties. This was also the case for *external orientation,* which was needed by company governance structures. To satisfactorily performing their roles, they should be outward looking or searching for benchmarks for their jobs. Aligning the internal mechanisms which were performed by company organs was better organised if there was *interdepartmental coordination* among them. In regard to the *human resource management* dimension, members of company governance structures or organs needed to be assured that performing such roles would be objectively assessed and related to better human resource practices. Finally, *improvement orientation* was seen as basic to the nature of human beings to serve others well, not only for her/his personal reasons (i.e. career advancement), but also for broader reasons that affect the wider community. Considering the above arguments in detail, the study proposes the following hypothesis:

Hypothesis 2: Organisational culture (that emphasises a higher degree of autonomy, external orientation, interdepartmental coordination, human resource orientation, and improvement orientation) is positively related to internal corporate governance (which is measured by the fulfilment of the duties of boards of commissioners, independent committees, audit committees, boards of directors, internal control groups, and the reinforcement of codes of conduct).

Since the beginning of the 1930s, experts have realised that the separation of ownership from control creates the condition of interests' divergence between owners and managers (Berle and Means 1932). Jensen and Meckling (1976) provided a solution by asserting that losses to the principal resulting from interest divergence may be restricted by enforcing a control structure upon the agent. A control structure in terms of ownership structure will significantly influence the decision-making process made by managers of the firm. Consequently, managers will behave as shareholders expect, namely they will seek to increase the corporate value. Relating to control structure, Walsh and Seward (1990) argue that internal or organisationally-based mechanisms and external or market-based mechanisms will bring the interests of agents and principals into congruence. Comparing the two types of controls, however, they argue that external controls are less preferable for shareholders since acquisition, divestitures, and ownership amendments are more expensive for owners to bear. Accordingly, the two most prominent internal controls, namely executive compensation schemes and governance structure, are favourable.

Internal control, thus, was investigated comprehensively and then related to organisational performance. For example, utilising M-structure as a proxy of internal control or internal corporate governance, Hill (1985) was among the first who found a relationship between internal corporate governance and performance. In regard to the first dimension of internal corporate governance, it was observed that those who monitor the management of the company were in fact exercising behavioural control. This duty was fulfilled by the *Boards of Commissioners* – one of the company's governance structures or organs. Saffold III (1988) was one of the first scholars who believed that behaviour control positively affected company performance. More specifically, boards of commissioners, who are tasked to 'scrutinize the highest decision makers' (Mizruchi 1983, p. 433) or to be 'the ultimate control' (Hill and

Snell 1988), safeguard shareholders' returns. In another study, the *Independent Commissioners (IC)* dimension was investigated by Hoskisson, Johnson and Moesel (1994), who stated that the presence of non-board blockholders, the proportion of board outsiders, board outsider equity, and board insider equity were related to organisational performance. In more recent studies, the positive link between the presence of an *Independent Commissioner (IC)* and organisational outcomes has also been validated (Florackis 2005; Matolcsy, Stokes, and Wright 2004). The dimensions of *Audit Committee (AC)* and *Internal Control Groups (ICG)* were also documented as important organs of internal corporate governance. Banks (2004) and the National Code for Good Corporate Governance (NCCG 2004) have argued that an *Audit Committee* and *Internal Control Group* safeguard companies through their fulfilment of their duties. In regard to *Boards of Directors*, these are selected and paid by companies to run organisations on a daily basis. They are obliged to provide satisfactory returns to the owners of the firms through the strategy they define, and its implementation. The contribution of this organ to organisational performance has been examined by Coughan and Schmidt (1985) and Murphy (1985), who concluded that there was a positive relationship between a *Board of Directors* and organisational performance. In more recent studies, Florackis (2005) has revealed the positive affect of the compensation of boards of directors on performance. This was also the case with the *Codes of Conduct (COC),* as its existence guards the interests of shareholders through promotion of proper behaviour (Banks 2004). Analysing the above empirical findings, the study proposes a subsequent hypothesis:

Hypothesis 3: Internal corporate governance (which is measured by the fulfilment of the duties of boards of commissioners, independent committees, audit committees, boards of directors, internal control groups, and the reinforcement of codes of conduct) is positively related to organisational performance.

3.6 Summary

This chapter presents the research paradigm that was utilised to guide the research process of this study. Two contrasting perspectives in particular, namely the qualitative approach and the quantitative approach, are discussed in this chapter. The qualitative approach sees reality as 'becoming', while the quantitative approach sees reality as 'being'. A further discussion related to ontology and epistemology is also

presented in this chapter. Considering that the constructs investigated in this study are measurable and observable, it was suggested that the quantitative approach, which includes a positivist ontology, the assumption of reality as 'being', and an empiricist epistemology fits with this current research.

This chapter also presents a research model relating organisational culture, internal corporate governance and organisational performance. The first two constructs are second-order constructs which consist of several first-order factors. Meanwhile, organisational performance is a first-order construct which is reflected by several observable indicators. This model is built upon the literature review presented in chapter 2.

The model developed posits that organisational culture has a positive association with organisational performance; that internal corporate governance has positive relationship with organisational performance; and that organisational culture has positive link with internal corporate governance. These are the hypotheses that are built and presented in this chapter.

Chapter 4: Research Design and Method*†

4.1 Introduction

Chapter 4 presents the systematic research procedures undertaken in this study, based on the theoretical perspectives outlined. This chapter begins with an explanation of the research procedures that guided this study, followed by a section describing an exploratory stage within which the research instruments were developed. This includes literature reviews, the objective of which was to capture the measuring instruments explaining the constructs used in this study. Following this, a section on the instruments validation and the data collection procedure is presented. The next section provides an explanation of the target sample, followed by discussion of the data analysis tool employed in this research. This begins with a discussion of the missing values, factor analysis procedures and the structural equation modelling

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* Part of this chapter has been presented at the following conferences:

Wibowo, A (2005), "The Impact of Organisational Culture and Internal Corporate Governance on Performance: A Conceptual Framework", in *International Seminar towards a New Indonesia*, (CD ROM), Faculty of Economics - Gadjah Mada University, Yogyakarta, 16-17 September.

Wibowo, A., Evans, R., and Quaddus, M (2007), "Does Organisational Culture Affect Organisational Performance? A Study of Indonesian Companies", in *Proceeding of the 7th Asian Academy of Management Conference,* eds. Nasurdin, A., Ibrahim, D.S., Osman, I., Haron, M.S., Hoo, Q.C., Ali, R., Ramayah, T., Zainuddin, Y. and Ahmad, Z.A., Asian Academy of Management and School of Management - Universiti Sains Malaysia, Malaysia, 21-25 May, pp. 242-251.

Wibowo, A., Evans, R., and Quaddus, M (2007), "The Impact of Internal Corporate Governance on Organisational Performance in Indonesian Companies", in *Proceeding of the 10th International Conference of the Society for Global Business and Economic Development,* eds. C. Jayachandran, K. Okachi, C. Chakraborty, R. Misra and R. Lord - Montclair State University and Ryukoku University, Kyoto, 8-11 August, pp. 3064-3084.

Wibowo, A (2007), "Application of Confirmatory Factor Analysis to the Study of Internal Corporate Governance Construct: A Higher-Order Factor Model", in *Curtin Business School Doctoral Students' Colloquium 2007* – Curtin University of Technology, Perth, 30-31 August.

Evans R., Quaddus, M., and Wibowo, A (2007), "Does Organisational Culture Affect Internal Corporate Governance? A Study of Indonesian Companies", in *Proceeding of the 21st ANZAM 2007 Conference,* (CD ROM), ed. Ross Chapman - University of Western Sydney, Sydney, 4-7 December.

† Part of this chapter has been accepted and will be presented in the following conference:

Wibowo, A., Quaddus, M., and Evans, R (2008), "Partial and Total Disaggregation Framework of a Second-order Construct in the Relationship of Organisational Culture and Internal Corporate Governance", in *7th European Conference on Research Methodology (ECRM) for Business and Management Studies*, Conference Chair Peter Sharp - Regent's College, London, UK, 19-20 June 2008.

(SEM) which includes covariance-based and variance-based SEM, LISREL estimation methods and model assessment. The next section discusses issues related the back-translation process. Finally, other methodological issues are highlighted, including common method variance, and the wording and ordering of the questions.

4.2 Research Process

The research process shown in Figure 4.1 was followed in this study. The literature review phase, within which the research questions are derived, is the first and most important phase. Albert Einstein, cited in Cooper and Schindler (2003, p. 64), highlighted that 'the formulation of a problem is far more often essential than its solution, which may be merely a matter of mathematical or experimental skills. To raise new questions, new possibilities, to regard old problems from a new angle require creative imagination and marks real advance in science'. This literature review was presented in Chapter 2.

In the next phase, the research model and hypotheses are developed: these were shown in Chapter 3. Developed from past studies relating to organisational culture, internal corporate governance, and organisational performance, the research model was formulated, and a rational foundation for establishing hypotheses among the constructs was built. Following this phase, questionnaire design and instrument validation is performed, which includes instrument development, pre-test or a qualitative validation based on feedback from selected experts, and a quantitative validation in the form of two separate pilot studies. Also, included in this phase is discussion of the scale employed in the questionnaire. The results of the aforementioned phases are inputs for revising the instrument. Once the research instrument is finalised, it is utilised to collect the data in the actual survey. This study relied on a survey as the primary method of gathering the data.

Following the completion of the above phases, the data colleted is analysed in two subsequent stages. The first analysis is factor analysis, which is intended to assist the researcher in selecting a representative subset of variables while retaining their original character. The second analysis is linear structural relationship analysis, which is aimed at testing hypotheses derived from the previous phase. These two analytical procedures are presented in this data analysis phase. In the final phase, the results of this study are interpreted, and the implications of these results are

discussed. In doing so, the results are referred to the literature reviewed in Chapter 2, as shown by the dotted line in Figure 4.1 relating the Results Interpretation phase with the Literature Review phase.

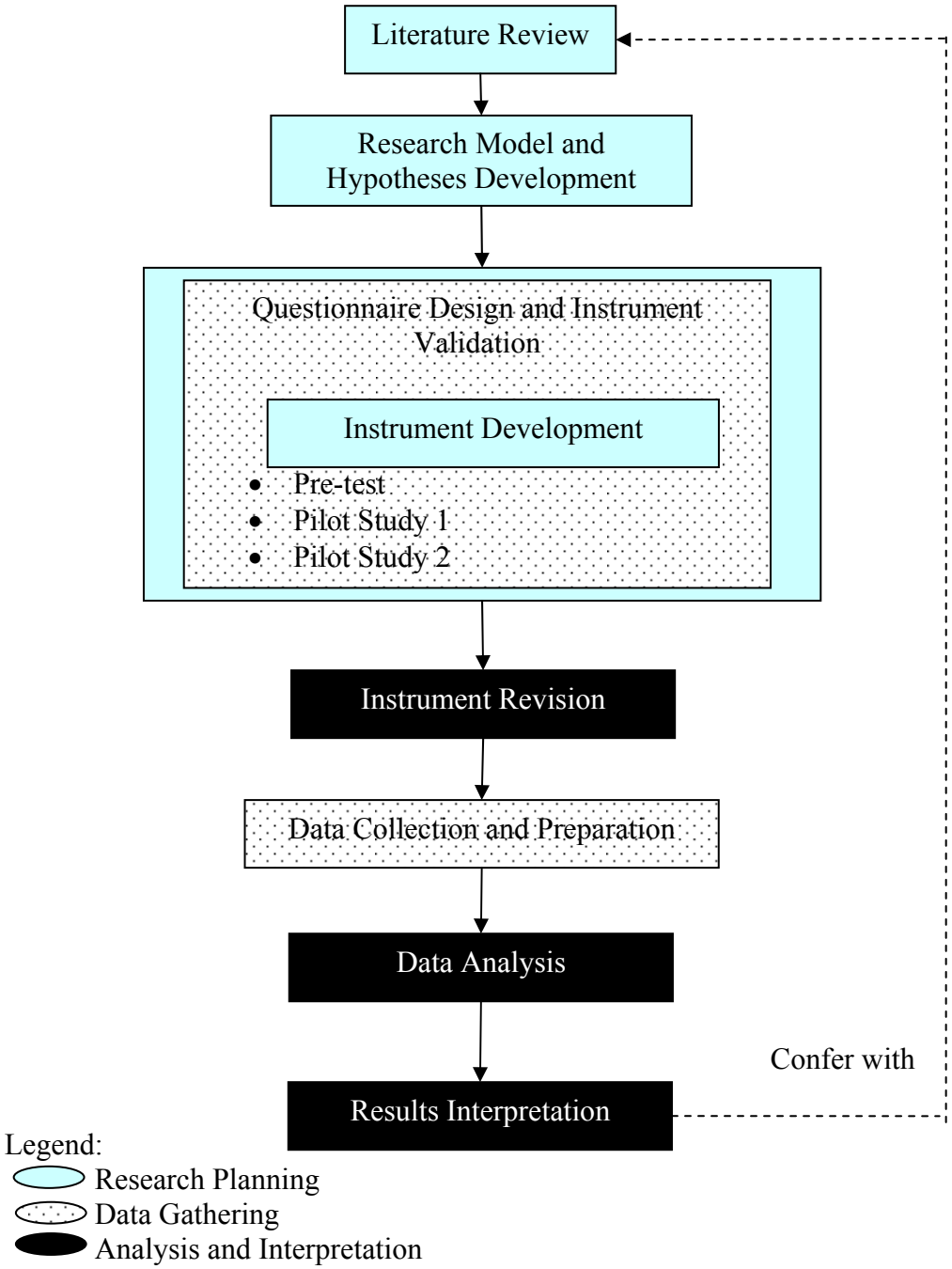

Figure 4.1 Research Process

4.3 Development of Instruments

For the purpose of this study, the measurement scales were developed and adapted from previous studies in the literature of organisational culture and theory, corporate governance, and organisational performance. As tables 4.1 to 4.12 show, all constructs refer to previous relevant studies. In particular, the internal corporate governance construct and its subconstructs were derived firstly from the broad literature review, and subsequently from interviews with several experts and practitioners of corporate governance in Indonesia, and further reviews of literature on Indonesian corporate governance. In the following paragraphs, these constructs will be discussed in detail.

In regard to the scale, the study asked participants to express their opinion of the extent of their agreement or disagreement using a six-point Likert scale, namely: (1) Strongly Disagree, (2) Disagree, (3) Somewhat Disagree, (4) Somewhat Agree, (5) Agree, and (6) Strongly Agree. All constructs employed this scale, except the organisational performance construct. For this construct, the study asked participants to express their opinion of the degree their organisation needed to improve in the 8 dimensions. Here, the six-point Likert scale ranged from (1) Very Little, (2) Little, (3) Somewhat Little, (4) Somewhat Much, (5) Much, and (6) Very Much. The utilisation of a six-point scale instead of a five- or seven-point scale was based on the argument advanced by Trompenaars and Hampden-Turner (1997), who provided empirical evidence that some Asian countries, including Indonesia, ranked high in the neutrality dimension. Consequently, the middle response, namely 'neutral' and 'neither agree or disagree' was excluded. It was believed that such a response would have contributed to central tendency error (Cooper and Schindler 2003).

Considering the length of questionnaire administered for this study and the effort of increasing participation, the 'respondent approach' (Quirk's Marketing Research Review cited in Cooper & Schindler (2003)) which emphasised 'what's the study about' and 'what's in it for me if I participate' was written in the introductory page, and the sequence of questions started with organisational culture questions, followed by internal corporate governance questions and organisational performance questions. Demographics and classification questions were placed at the end of the questionnaire. A full set of questionnaires is shown in Appendix 2 (English version) and Appendix 3 (Bahasa Indonesia version).

4.3.1 Organisational Culture

Organisational culture as second-order construct is reflected by five first-order constructs. The description of each construct and corresponding items are provided in the following section.

4.3.1.1 Autonomy (Auto)

Six items were adapted and modified from studies of Wilderom and Van den Berg (1998; 2000); Wilderom, Glunk, and Maslowski (2000); and Van den Berg and Wilderom (2004), which reflect the decision latitude possessed by employees in the company. Unless employees have freedom to contribute their skills to advancing the company, it is unlikely progress can be made. The items used to measure autonomy are printed in Table 4.1.

Table 4.1: Autonomy Construct and References

No.	Construct	Items	References
1	Autonomy	1. There is room for non-managerial employees to make their own decisions 2. There is freedom for employees to depart from rules 3. There is freedom for employees to implement decisions according to their own views 4. Employees influence important decisions concerning work 5. There is freedom for employees to plan their own work 6. There is an opportunity for employees to bring forward ideas before decisions are made	Wilderom and Van den Berg (1998; 2000); Wilderom, Glunk, and Maslowski (2000); and Van den Berg and Wilderom (2004)

4.3.1.2 External Orientation (EO)

External orientation was operationalised using scales adapted from the studies of Wilderom and Van den Berg (1998; 2000; 2005); Wilderom, Glunk, and Maslowski (2000); and Nahm, Vonderembse, and Koufteros (2004). This dimension reflects the willingness and effort made to anticipate and respond to customers' demands. The six items that captured the external autonomy dimension are shown in Table 4.2.

Table 4.2: External Orientation Construct and References

No.	Construct	Items	References
2	External Orientation	1. There is a quick reaction to developments in the market 2. There is an investigation of the wishes and needs of customers 3. There is active canvassing of new customers 4. Company is working to improve the local market position 5. There is a thorough training of employees in systematically gathering information on what customers want to see improved 6. Company has an edge over local competitors	Wilderom and Van den Berg (1998; 2000; 2005); Wilderom, Glunk, and Maslowski (2000); and Nahm, Vonderembse, and Koufteros (2004).

4.3.1.3 Inter-departmental Coordination (IDC)

Since modern organisations are characterised by the division of work, which subsequently demands the flow of work and information across functions, the inter-departmental coordination construct was employed in this study. The items of this dimension were adapted and modified from the studies of Denison (1990); Nahm, Vonderembse and Koufteros (2004); Wilderom and Van den Berg (1998; 2000); Van den Berg and Wilderom (2004); and Wilderom, Glunk, and Maslowski (2000). The seven items used in this dimension are presented in Table 4.3.

Table 4.3: Inter-departmental Coordination Construct and References

No.	Construct	Items	References
3	Inter-departmental Coordination	1. There is useful cooperation between departments 2. There is exchange of useful information between departments 3. Departments support one another in the resolution of problems 4. There is mutual communication between heads of departments 5. Working with someone from another part of this organisation is like working with someone from a different organisation 6. Work is organised so that each person can see the relationship between his or her job and the goals of the organisation 7. Cooperation across different parts of the organisation is actively encouraged	Denison (1990), Nahm, Vonderembse and Koufteros (2004); Wilderom & Van den Berg (1998; 2000); Van den Berg and Wilderom (2004); and Wilderom, Glunk, and Maslowski (2000)

4.3.1.4 Human Resource Management (HRM)

To measure the dimension of human resource management, the study adapted and modified the research instruments of previous studies by Wilderom and Van den Berg (1998; 2000); Wilderom, Glunk, and Maslowski (2000); Van den Berg and Wilderom (2004); and Hofstede, Neuijen, Ohavy and Sanders (1990). Out of seven items, the four items derived from the studies of Wilderom and Van den Berg (1998; 2000), and Wilderom, Glunk, and Maslowski (2000), while the last three items originated from the research of Hofstede et al. (1990). In essence, this dimension covered employees' selection process, the employees' functioning support, and the performance appraisal of employees. The seven items are shown in Table 4.4.

Table 4.4: Human Resource Management Construct and References

No.	Construct	Items	References
4	Human Resource Management	1. Performance appraisals are taken seriously 2. Employees obtain useful information about their functioning 3. There is careful selection of new personnel 4. Job competency is the only criterion in hiring people 5. Employees are told when a good job is done 6. Managers help good people to advance 7. There is little concern for personal problems of employees	Wilderom and Van den Berg (1998; 2000); Wilderom, Glunk, and Maslowski (2000); Van den Berg and Wilderom (2004); and Hofstede, Neuijen, Ohavy and Sanders (1990).

4.3.1.5 Improvement Orientation (IO)

Similar to the previous construct, the works of Wilderom and Van den Berg (1998; 2000); Wilderom, Glunk, and Maslowski (2000); Van den Berg and Wilderom (2004); Hofstede (1990), and Denison (1990) contributed to the design of improvement orientation dimension. Adapted and modified form those above studies, this dimension captured the ambition of the members of organisation. Operationalised using seven items, the dimension is outlined in Table 4.5.

Table 4.5: Improvement Orientation Construct and References

No.	Construct	Items	References
5	Improvement Orientation	1. Employees closely monitor their own way of working 2. Employees search for possibilities to improve the organisation 3. There are initiatives taken by employees to improve the way in which the work is done 4. New and improved ways to do work are continually adopted 5. Employees try to be pioneers 6. People put in maximal effort 7. Think three years or more ahead	Wilderom and Van den Berg (1998; 2000); Wilderom, Glunk, and Maslowski (2000); Van den Berg and Wilderom (2004);Hofstede (1990); and Denison (1990)

4.3.2 Internal Corporate Governance Construct

Internal corporate governance is a second-order construct that is reflected by six first-order constructs. The items of each first-order construct are discussed in the following sections.

4.3.2.1 Duties of Board of Commissioners (BOC)

For the purpose of this study, the early version of the dimension of duties of board of commissioners was developed from the work by Banks (2004) and through interviews. However, the work of Banks was derived from the context of the corporate governance systems in western countries, most of which are one-tier systems. To measure the duties of boards of commissioners in Indonesia, which uses a two-tier system, adjustments had to be performed. Having performed the first stage of the fieldwork, which involved interviews and a literature review of the Indonesian corporate governance system, the study came up with eleven items that captured the duties of boards of commissioners. The main references for this dimension were the Indonesian Company Law (Tabalujan 1997) and the Code for Good Corporate Governance Ref. 4.0 (NCCG 2001). This dimension represented the interests of shareholders and stakeholders by overseeing the fulfilment of the duties of board of directors and by implementing internal controls. The eleven items of these duties are shown in Table 4.6.

Table 4.6: Board of Commissioners Construct and References

No.	Construct	Items	References
6	Duties of Board of Commissioners (BOC)	1. BOC supervises the actions of BOD 2. BOC gives advice to BOD when required 3. BOC ensures that BOD complies with Articles of Association 4. BOC ensures that BOD complies with regulations having the force of law 5. BOC draws-up minutes of each BOC meeting 6. BOC ensures that BOD reads minutes from each BOC meeting 7. BOC creates an ethical environment 8. BOC ensures that BOD protects the interests of shareholders 9. BOC ensures that BOD protects the interests of stakeholders 10. BOC ensures that BOD applies a transparent system for the recruitment of executives other than members of the BOD 11. BOC establishes certain committees as needed (e.g. audit, compensation, nomination, remuneration, risk, etc.)	Indonesian Company Law (Tabalujan 1997) and NCCG (2001)

4.3.2.2 Duties of Independent Commissioners (IC)

The National Committee for Corporate Governance (2004) set up guidelines for the duties of independent commissioners. The independency of commissioners is shown by the selection of criteria which state that the independent commissioners are people that have no affiliation with the company, other commissioners, the board of directors, or controlling shareholders of the company, and do not have a business relationship with the company's ultimate business. In developing duties of independent commissioners, the study interviewed several experts of corporate governance in Indonesia during the initial stage of the fieldwork. A review of literature on the Indonesian corporate governance system was also conducted, in order to capture the domain of the independent commissioners' construct. Along with the guidelines of the National Committee for Corporate Governance in Indonesia (2004) and the Jakarta Stock Exchange Directors' decree No. *Kep-315/Bursa Efek Jakarta/06-2000* the study produced eleven items for this construct. These items are presented in Table 4.7

Table 4.7: Independent Commissioners' Construct and References

No.	Construct	Items	References
7	Duties of Independent Commissioners (IC)	1. IC ensures that BOD defines business strategy of the company 2. IC ensures that company hires professional managers 3. IC ensures that company establishes communication reporting link 4. IC ensures that company establishes control system 5. IC ensures that company establishes audit system 6. IC ensures that company complies with regulations 7. IC ensures that company manages risk 8. IC ensures that company provides transparent financial reporting 9. IC ensures that company treats minority shareholders fairly and honestly 10. IC ensures that company discloses transactions that have conflicting interests 11. IC ensures that company organs are accountable	NCCG (2004) and Jakarta Stock Exchange Director's decree No. *Kep-315/Bursa Efek Jakarta/ 06-2000* (relating to independent commissioners).

4.3.2.3 Duties of Audit Committee (AC)

As one organ of the corporate governance structure in Indonesia, the existence and function of the audit committee were strengthened with The Stock Exchange Supervisory Body's circular letter No. *SE-03/PM/2000* and the Jakarta Stock Exchange Director's decree No. *Kep-315/BEJ/06-2000*. In this regard, the National Committee for Corporate Governance (2004) established guidelines for developing an effective audit committee. To derive the thirteen items of this dimension the study conducted interviews and a literature review in its earlier stages. The items derived are shown in Table 4.8.

Table 4.8: Audit Committee Construct and References

No.	Construct	Items	References
8	Duties of Audit Committee (AC)	1. AC oversees financial reports, ensuring they follow the Indonesian Accounting standard 2. AC monitors the external auditor's audit of financial report 3. AC monitors the process of managing risk 4. AC ensures that the report of internal auditor considers risk management 5. AC ensures that BOD complies with recommendations relating to risk management 6. AC creates disciplines and control which lessen the possibility the company being jeopardised 7. AC empowers internal audit 8. AC promotes adequate structures of internal control 9. AC improves the quality of financial disclosure and reporting 10. AC reviews the scope, accuracy, and cost-effectiveness of external audit 11. AC reviews the independence and objectivity of external auditor 12. AC acts as communication channel between external auditors and BOC 13. AC reviews the results of external audit	NCCG (2004) and *Bapepam* (The Stock Exchange Supervisory Body) circular letter *No: SE-03/PM/2000* and Jakarta Stock Exchange Director's decree *No. Kep-315/BEJ/06-2000* (relating to audit committee)

4.3.2.4 Duties of Board of Directors (BOD)

The early version of the duties of the board of directors or iginated from the work of Banks (2004) and through interviews with several experts on corporate governance in Indonesia. Since the study was carried out in Indonesia, a thorough understanding of the duties of boards of directors needed to be based on law, the rules and guidelines which have been established in Indonesia. Indonesian Company Law, Law No 1 of 1995 is the main reference for such duties. However, this law provided only general duties of boards, essentially stating that boards of directors were responsible for the management of the company. Consequently, the amendments to these duties needed to be made. Based on the interviews and the guidelines published by the National Committee for Corporate Governance (2001) the study obtained seventeen duties of boards of directors. In sum, this dimension represented the tone of the board of directors in advancing the company, protecting interested parties, being accountable for the company's decisions, and providing full and accurate information. The seventeen items of this dimension are presented in Table 4.9.

Table 4.9: Board of Directors Construct and References

No.	Construct	Items	References
9	Duties of Board of Directors (BOD)	1. BOD defines strategy of the company 2. BOD manages the implementation of strategy of the company 3. BOD protects the interests of shareholders 4. BOD protects the interests of stakeholders 5. BOD complies with the Articles of Association of the Company 6. BOD complies with regulations having the force of law 7. BOD creates an ethical environment 8. BOD creates a proper human resource management function 9. BOD enforces codes of conduct 10. BOD establishes internal control systems to safeguard company assets 11. BOD draws-up minutes for each BOD meeting 12. BOD ensures that BOC reads minutes of BOD meetings 13. BOD advises the audit committee when to seek a second opinion on an accounting issue 14. BOD ensures that BOC has access to information about the company 15. BOD provides shareholders with full and accurate information about the company 16. BOD communicates with internal parties on items of corporate importance 17. BOD ensures transparency in the financial framework of the company	Indonesian Company Law (Tabalujan 1997) and NCCG (2001)

4.3.2.5 Duties of Internal Control Group (ICG)

Unless the internal control group is in place, it will be very difficult for the board of commissioners and the board of directors to perform effectively. The Internal Control Group is a group of technical experts that provides review, assessment, and control of a company's operations. In this regard, the internal control group plays significant role in bridging the daily business activities of the company and policies launched by higher levels of the corporate structure. Accordingly, such an important role needs to be assessed if internal corporate governance is to take place. To measure the duties of the internal control group the study undertook a literature review of corporate governance system in Indonesia. Derived from the conceptual development of Daniri (2005) and the guidelines of the National Committee for

Corporate Governance (2001) the research produced five items for this dimension, as shown in Table 4.10.

Table 4.10: Internal Control Group Construct and References

No.	Construct	Items	References
10	Duties of Internal Control Group (ICG)	1. ICG creates policies to secure the assets of the company 2. ICG creates policies to increase the operational efficiency and effectiveness of the company 3. ICG develops the reliability and the comprehensiveness of accounting/financial information 4. ICG ensures compliance with applicable policies and regulatory requirements 5. ICG ensures substantive audit findings are elevated and resolved	Daniri (2005) and NCCG (2001)

4.3.2.6 Codes of Conduct (COC)

The early versions of codes of conducts originated from the conceptual framework of Banks, who highlighted the importance of them as 'the standards for behaviour and action when dealing with those inside and outside of the firm' (2004 p. 47). Looking at Indonesian corporate governance literature, the National Committee for Corporate Governance (2004) has established codes of conduct that became the items of this dimension in this study. The seven items of the codes of conduct are shown in Table 4.11.

Table 4.11: Codes of Conduct Construct and References

No.	Construct	Items	References
11	Codes of Conduct (COC)	My company has codes of conduct which: 1. … create an environment where conflicts of interest are avoided or eliminated 2. … create an environment where people do not engage in insider trading for the benefit of individual interest 3. … make certain that no one engages in corrupt practices 4. … make certain that no one engages in activities that jeopardise the company's reputation 5. … treat all stakeholders fairly and honestly 6. … develop mechanisms where violations of company policy can be reported without fear of retribution 7. … create an environment in which the decisions of company's organs are obeyed	Banks (2004) NCCG (2004)

4.3.3 Organisational Performance (OP)

Eight items of perceived organisational performance were adapted from Wilderom and Van den Berg (1998), and Wilderom, Glunk and Maslowski (2000). The inclusion of the items is based on the multiple-stakeholder approach, which acknowledges that organisations are faced with competing goals that should be balanced to warrant organisations' continuing operations (Wilderom and Van den Berg 2000). The items are shown in Table 4.12.

Table 4.12: Organisational Performance Construct and References

No.	Construct	Items	References
12	Organisational Performance (OP)	In your opinion, to what degree does your organisation **need to improve** on the following performance criteria? 1. Efficiency 2. Customer satisfaction 3. Managerial behaviour 4. Professional behaviour 5. Service quality 6. Contact with clients 7. Position on the market 8. Reputation	Wilderom and Van den Berg (1998), and Wilderom, Glunk and Maslowski (2000)

4.4 Instruments Validation and Data Collection Procedure

In an effort to build valid and reliable research instruments the study followed the flowchart developed by Cooper and Schindler (2003). This flowchart consists of the following sequences: preparing a preliminary analysis plan, pretesting individual questions (first test), pretesting individual questions (second test), and finally coming up with an instrument ready for data collection.

In the first phase, having research questions, the study proceeded with the selection of the data type, a communication approach, and a process structure. In terms of data type, interval data was used; and considering Trompenaars and Hampden-Turner (1997), six alternative answers for each item of the Likert's scale were operationalised. Relating to the communication approach, a combination of interview and a self-administered distribution of questionnaires were used. The interview process that was carried out was intended to develop an understanding of the constructs, and to adjust the constructs in accordance with the law and regulations implemented in Indonesia. Later on, when research items were finalised,

the questionnaire was to be distributed directly from researcher to respondents. In regard to question structure, semi-structured questions were used as guidelines in interviewing several experts in Indonesia, while structured questions in the research instrument sought to gather information from respondents.

In the second phase, measurement questions that were built upon the literature review and interviews were summarised. As the study was conducted in Indonesia the selection of experts[17] who possessed knowledge of the constructs being studied, namely organisational culture, the corporate governance system in Indonesia, and organisational performance was of utmost importance. Overall, six experts were interviewed during this stage. It was important to evaluate whether the items in the first draft of the questionnaire belonged to the constructs being studied, therefore feedback given by the above participants was incorporated into the draft questionnaire.

The above qualitative validation was followed by quantitative validation by administering a draft of the research instrument to surrogate respondents in phase three. The test of individual questions, or in this case pilot study 1, was intended to refine the measurement questions. Zikmund described a pilot study as 'trial runs with a group of respondents for the purpose of detecting problems in a questionnaire's instructions or design' (2003 p. 229). The respondents of pilot study 1 were employees of a State Owned Company and comprised 30 middle-level managers in this firm. This number was deemed sufficient (Cooper and Schindler 2003). The study also performed reliability tests to reveal statistical proof of the weaknesses of research instruments. Results indicated that refinement in terms of rewording two items and changing the general instructions was needed, as shown by the low Cronbach's alpha. Details are presented in Chapter 5.

[17] In this study, interviewees' expertise was acknowledged due to the qualifications they hold. The first two persons graduated with doctoral degree from foreign universities, are researchers, and supervise research of PhD students in Indonesia. One of these two persons is independent commissioner of two companies in Indonesia. The third person is one of director of Capital Market Supervisory Agency Minister of Finance The Republic of Indonesia, and member of the National Committee on Governance. The fourth person is researcher of Non-Government Organisation focusing on the practices of corporate governance of Indonesia. The fifth person is author of book on good corporate governance in Indonesia, a vice-director of one of biggest electronic company in Indonesia, member of the National Committee on Governance, and was former director of Jakarta Stock Exchange. The sixth person is PhD graduate of foreign university, an academic staff, and researcher in the area of organisational behaviour.

Following the amendments of the research instrument used in pilot study 1, the study tested individual questions for the second time, known as pilot study 2 in this study. As with pilot study 1, pilot study 2 was utilised to further detect any ambiguous and misunderstanding questions, and to revise the questionnaire's design if necessary. As expected, no more vague and confusing items were detected, as was shown by the increase in the Cronbach's alpha coefficient. Suggestions accepted from pilot study 2 included limiting the separation of items within one construct into two different pages, and changing the font to make the space between lines wider.

Finalising, the readiness of the research instrument for data collection is the final phase of the flowchart suggested by Cooper and Schindler (2003). In this study, the questionnaire was self-administered to a targeted population. Choosing this method was based on several advantages, such as low cost, perceived anonymity, thinking time about questions allowed and convenience for respondents (Cooper and Schindler 2003; Zikmund 2003). Nonetheless, the major drawback of this method is non-response, especially when the questionnaire is poorly designed (Zikmund 2003). As such, to increase the response rate, attempts were carried out: (1) to make and design the questionnaire so that it was as attractive as possible and to ensure that it could be easily understood; (2) Keep the length of the questionnaire as short as possible; (3) Write a 'respondent approach' section, which included what the study was about and 'what's in it for me if I participate'; (4) promise confidentiality; (5) obtain sponsorship from 'respected' people (Zikmund 2003; Quirk's Marketing Research Review cited in Cooper and Schindler 2003). Results of the questionnaire survey are presented in Chapter 6 and 7.

4.5 Sample

This study implicitly demanded that respondents were familiar with the topics of organisational culture, internal corporate governance, and performance. Specifically, the subject of internal corporate governance has traditionally been the interest of middle and upper levels of the management hierarchy. It is not an area of daily discussion for blue-collar workers. Managers as respondents in research relating to culture and organisational phenomena had been common in several previous studies (as examples see Heuer, Cummings, and Hutabarat 1999; Schneider and DeMeyer 1991). Those who occupied middle- and upper-level position were believed to have

higher levels of education compared to those that were in the lower levels. For that reason, the study approached the sample through educational institutions which run programs designed for middle- and upper-managers.

It is likely to admit that there could be possible bias in selecting these groups of managers. Unselected managers who did not engaged in higher degree studies could possibly possess the information being targeted by the investigative questions. To balance, however, adequate motivation to cooperate in research survey should also be weighted, as there were cases of very low response rate in surveying middle- and upper-managers. Additionally, the educational institutions in Indonesia played important role in disseminating the new concept of internal corporate governance to organisations in Indonesia through publications of their research, case studies, and discussion forum to media. It is expected that exposure in order to gauge this topic is prevalent in selected respondents.

In regard to the selection of middle- and upper-managers, the questionnaire given to the respondents contained two demographical questions related to the position of the respondent in the company.

a. How many hierarchical layers above your current position to top?
b. How many hierarchical layers below your current position to the lowest position?

Response to the above questions provides researcher a controlling data relating to whether the respondent belonged to middle-managers group or upper-managers group.

The above technique is known as purposive sampling. This technique 'is characterised by the use of judgment and a deliberate effort to obtain representative samples by including presumably typical areas or groups in the sample' (Kerlinger and Lee 2000, p. 179). Thus, the use of groups of managers who were taking educational programs and/or training sessions in educational institutions in Indonesia as a proxy of middle- and upper-level managers in Indonesia was deemed appropriate, considering the purposive sampling method. Additionally, this nonprobability sampling method was applied in view of the time constraints and to ensure cost efficiency, as well as to increase the response rate.

In supporting this approach, Denison (1984, p. 8) methodologically used the individual respondent in his study of the culture of an organisation by stating that 'the study was based on individual perceptions of organisational practices and

conditions; these perception were used to characterise the culture of each organisation'. Similarly, Denison and Mishra (1995) and Carmeli and Tishler (2004) used individual perception to measure organisational culture in their research. Supporting such an approach were Schein, and Van Aken and Strikwerda, cited in De Witte and Van Muijen (1999), who highlighted that asking individuals about the perception of organisational culture is natural as they are the enablers, the makers of the organisation and its culture.

Individual response, although applied in many studies of organisational culture, is not immune from deficiencies as acknowledged by Calori and Sarnin (1991). Nonetheless, they deemed this approach appropriate, stating: 'There is bias in asking individuals to respond to questions concerning the whole company. However, it seemed to be a better solution than aggregating specific work group practices and values, mainly because the surveys do not cover the whole population of the company' (1991 p. 61). Pointing to the aggregation technique, Hofmann (1997) claimed that the shortcoming of this approach is that potentially meaningful individual level variance in the items or construct is neglected.

4.6 Data Analysis

4.6.1 Missing Values

It is very likely that any study will have missing values. The important issue is not the missing values themselves, rather it is the causes underlying the missing values. Unless the reasons behind the missing values are analysed, any attempt to replace such values will undeniably distort the conclusion of the study, due to the potential 'hidden' biases of the results (Hair et al. 1998). As such it is very important to ascertain the randomness of the missing values. For this reason, Little and Rubin (2002) introduced this concept and a test for randomness.

To date, computer packages have been able to assess the degree of randomness of missing values. SPSS version 13, for example, provides users the estimated statistics of Little's MCAR, indicating whether the missing values can be classified as missing completely at random or not. Having determined randomness, a study then can choose two approaches of imputation, namely the all-available approach or the replacement approach. The first approach is using all available information as the imputation technique. This method does not actually replace the

missing values, but instead imputes the distribution characteristics (e.g., means or standard deviations) or relationship (e.g., correlations) from all available valid values (Hair et al. 1998). The second approach replaces the missing values with estimated values derived from available information about the sample. In this regard, the estimated values can be derived from various methods, namely case substitution, mean substitution, cold deck imputation, regression imputation, and multiple imputations (Hair et al. 1998).

For this study, based on SPSS missing values analysis, EM (Expectation-Maximisation) estimated statistics revealed that the significant level of Little's MCAR was .035, indicating that the missing values could be considered to be missing completely at random (Little and Rubin 2002). The subsequent procedure to deal with these missing values is to replace them using available methods. Given that each method listed above has advantages and disadvantages (see Hair et al. 1998 for details), this study used series means to substitute the missing values, for the following reasons:

a. The percentage of missing values for each variable was less than 5%, with the highest percentage of 2.0% on item 4 the *External Orientation (EO4)* dimension. Whatever method used would not have significantly influenced the results of the study.
b. More than 56% of the missing values had no different estimated means, calculated using four different methods (series means, regression means, EM means, and MI (Multiple Imputation) means. This percentage would have been even higher if decimal places were reduced to 2 from the SPSS default program of 4 decimal places, which accounted for 98%.
c. The series means method is most common (Schwab 2005) and has been widely used in many studies (Raaijmakers 1999).

4.6.2 Factor Analysis

Once missing data had been replaced using series means, factor analysis was undertaken. The purpose of factor analysis is to reduce the number of observed variables into a representative subset of variables (factor) while retaining the original character of the sample. It offers researchers a multivariate statistical technique for achieving a better understanding of the structure of the data by effectively extracting information from a large database (Hair et al. 1998). Too large a number of variables

can be a disadvantage, as 'increasing the number of variables also increases the possibility that the variables are not all uncorrelated and representative of distinct concepts' (Hair et al. 1998, p. 91), and it causes computation problems[18]. This analysis was particularly important in this research, as the subsequent analysis using structural equation modelling demanded an appropriate sample size given the number of variables. As claimed by Holmes-Smith (2001) the requirement of sample size increases almost exponentially as the number of variables is increased.

In this study exploratory factor analysis, which searches for structure among a set of variables or is employed as a data reduction method, was used. In this regard, a maximum of 4 variables for each construct was decided on in advance, considering the sample size requirement for structural equation modelling in the subsequent part of the data analysis. In extracting the variables this study applied the principal component rather than the common factor. This choice was made for empirical and practical reasons. Firstly, Mulaik and McDonald (1978) claimed that the latter approach suffers from factor indeterminancy as no single unique solution can be derived from any individual respondent. Secondly, Hair et al. (1998) stated that computationally it takes substantial computer time and resources to calculate the estimated communalities used to represent the shared variance, especially for larger-size variables. Thirdly, as a result of this complication, the component factor is widely used in many behavioral and social studies.

A number of stages comprise a factor analytic process (Coakes and Steed 1999). First, there should be enough evidence of correlation between variables to appropriately apply factor analysis. The second stage is determining the number of factors necessary to represent the data. In this regard, communalities, total variance explained-Eigenvalues, scree plot, and component matrix are required. The last stage is making rotation to make the factor structure more interpretable. In doing so, orthogonal rotation was selected and was followed by the varimax method of rotation.

Assessing the degree of consistency between multiple measurements of indicators was then carried out. Within this stage, the number of variables was reduced. A maximum of 4 indicators for each individual construct was decided upon,

[18] Jöreskog and Sörbom (1990) stated (1) the computation of asymptotic covariance matrices demands a large amount of computer memory when the number of variables is at all large, (2) reasonable precision requires a very large sample, and (3) the missing observations can not easily be solved.

to allow the subsequent structural equation modelling analysis to be carried out without the problem of sample size (Holmes-Smith 2001). To ensure that the scale or set of measures accurately represented the concept of interest, the factor analysis proceeded with a construct validity test. In this regard, the Spearman correlation coefficient was utilised as it is appropriate for ordinal data, or for interval data that do not satisfy the non-normality assumption (SPSS 2004). To satisfy the requirement of validity the coefficient needed to be significant at the 0.01 level (2-tailed). The results of factor analysis are presented in Chapter 6 of this study.

4.6.3 Structural Equation Modelling (SEM)

Following the completion of the factor analysis, the subsequent data analysis of this study was performed using structural equation modelling (SEM). This is a method for representing, estimating, and testing a theoretical network of relationships between variables or constructs (Rigdon 1998). SEM, as one of the 'second generation of multivariate analysis' (Fornell 1987, p. 408), is superior to the first generation techniques (e.g. multiple regression, principal component analysis, cluster analysis) in advancing understanding of the merging of theories and empirical data. This is due to its ability to deal with many dependent constructs and to treat error terms.

SEM assesses whether a sample covariance/variance or correlation matrix is consistent with the hypothetical matrix of the research model proposed by the researcher. SEM follows these procedures (Kelloway 1998; Hair et al. 1998):

a. Model specification, where the research model is developed from a theoretical perspective that links every variable or construct in the model.
b. Identification, which shows the degree to which there is a sufficient number of equations to 'solve' for each of the coefficients (unknowns) to be estimated.
c. Estimation, which solves the equations by using numerical methods to estimate parameters.
d. Testing-fit, which is based on the number of goodness-of-fit indices.
e. Re-specification, which is intended to improve the fit of the model.

In judging model fit, users of SEM can analyse its outputs, namely the estimates of the designated model parameters, the estimates of the standard errors for

the estimated parameters, the estimates of the proportion of variance explained (for the dependent variables), the goodness-of-fit statistics, and diagnostic statistics which indicate the source of misfit (Rigdon 1998).

4.6.3.1 Covariance-Based and Variance-Based Structural Equation Modelling

SEM can be differentiated into two types – one based on covariance and the other based on variance. In this regard, Chin and Newsteed (1999) thoroughly compared and discussed these two types of SEM; their findings are reproduced and adapted in Table 4.13.

Table 4.13: Comparison of Covariance-Based and Variance-Based Structural Equation Modelling

Criterion	Covariance-Based SEM (CBSEM)	Variance-Based SEM (VBSEM)
Approach	Covariance based	Variance based
Objective	Parameter oriented	Prediction oriented
Parameter Estimates	Consistent	Consistent as indicators and sample size increases (i.e., consistency at large)
Assumptions	Typically multivariate normal distribution and independent observations (parametric)	Predictor specification (non-parametric)
Implications	Optimal for parameter accuracy	Optimal for prediction accuracy
Sample size	Ideally based on power analysis of specific model— minimal recommendations range between 200 to 800.	Power analysis based on the portion of the model with the largest number of predictors. Minimal recommendations range from 30 to 100 cases.
Software	e.g. LISREL, EQS, AMOS	e.g. PLS-PC, PLS-Graph, SmartPLS

Reproduced and adapted from Chin and Newsteed (1999)

CBSEM is 'theory oriented, and emphasises the transition from exploratory to confirmatory analysis' (Jöreskog and Wold cited in Barclay, Higgins and Thompson (1995, p. 287)). In other words, it is best used for theory testing and development. In performing these roles, it requires data to follow a multivariate normal distribution (therefore being parametric), and sample size to be large. As an alternative of CBSEM, VBSEM is available. It 'is primarily intended for causal-predictive analysis in situations of high complexity but low theoretical information (Jöreskog and Wold cited in Barclay, Higgins and Thompson (1995, p. 288). Therefore, VBSEM is prediction-oriented modelling. As for other characteristics of VBSEM, it is

acknowledged that this second type of SEM is not as restrictive as CBSEM (e.g. smaller sample size, and no normality assumption). The most popular software programmes for CBSEM and VBSEM are LISREL and PLS, respectively.

Notwithstanding the ease-of-use and strengths of VBSEM, its limitations are worth considering. In particular, Gefen, Straub, and Boudreau (2000) highlighted the capabilities of both approaches and reported that despite its capabilities, PLS (the software used for VBSEM) experienced the following deficiencies: (a) PLS does not support rigorous analysis of all the variance components of each observed variable (common, specific, and error) as an integral part of assessing the structural model; (b) PLS does not allow the non-common variance of an observed variable to be set to a given value in the research model; and (c) PLS does not provide a statistic to compare alternative confirmatory factor analyses models. These caveats are not intended to penalise the PLS approach, but are given as a reminder that there are particular conditions that make PLS appropriate, as there are also requirements which make LISREL best applied. Over the past two decades, researchers have examined this issue, and advised that PLS is preferred over LISREL when (1) violation of multivariate normality assumption is present, (2) sample size is small, and (3) non-convergent or improper solutions are likely to occur (Bagozzi, Yi, and Singh 1991; Fornell and Bookstein 1982). It is fortunate that these requirements no longer hold in latter versions of LISREL, as a new estimation method has allowed non-normal multivariate distribution, and not large sample sizes to be executed[19]. Furthermore, since the research model of this study was conceptually developed as a second-order construct, using LISREL was much easier for dealing with this construct than using PLS software.

4.6.3.2 LISREL Estimation Methods

Considering the discussion relating to PLS and LISREL in subsection 4.6.3.1 above, this study utilises LISREL software for subsequent analysis of the data. The objective of LISREL is to demonstrate that the operationalisation of the theory being observed is validated and not disconfirmed by the data (Hair et al. 1998; Gefen, Straub, and Boudreau 2000). In doing so, LISREL provides a number of estimation methods, such as Generalised Least Square (GLS), Maximum Likelihood (ML),

[19] See the Robust Maximum Likelihood (RML) method of estimation of LISREL version 8 for a detailed discussion.

Ordinary Least Square (OLS), Robust Maximum Likelihood (RML), among many others. The main difference between most estimation methods is the way they minimise the discrepancy between the implied covariance matrix and the actual covariance matrix (Holmes-Smith 2001).

Choosing among the available methods of estimation is neither straightforward nor arbitrary. Several factors are to be considered, such as multivariate distribution of the data, sample size, type of data, and model complexities. Given these factors, this study employed the Robust Maximum Likelihood (RML) method, the reasons for this choice being highlighted in detail in Chapter 7.

4.6.3.3 Model Assessment

Anderson and Gerbing (1988) recommended that SEM researchers approach the analysis of data using two-step modelling, namely that they employ a measurement part and a structural part. Following this advice, assessment of the model can be divided into two sequences. The first is assessing the measurement part of SEM, and the second part is evaluating its structural part.

Assessment of measurement properties adheres to the following procedures:

a. Assessment of unidimensionality (and convergent validity) of each latent variable, in which parameter estimates, squared multiple correlations, overall model fit are examined.
b. Model re-specification/modification to examine whether the results indicate goodness-of-fit indexes (or indices) or not of the particular model. The tools that are available are residuals and a standardised residual, the modification indices, and the expected change.
c. Test of reliability and validity of measurement properties in which squared multiple correlations are again examined, and measurement of construct reliability, variance extracted estimate, convergent validity, and discriminant validity is performed.

Considering that this study employed higher-order constructs, the two-step modelling was intervened by confirmatory factor analysis of second-order constructs; this take place before the structural part of SEM (Gerbing, Hamilton, and Freeman 1994). Thus the results of the measurement part of first-order constructs were used as

inputs for confirmatory second-order constructs. These constructs consisted of several first-order constructs (see research model in section 3). The first-order constructs, in turn, were measured with reflective indicators. In this study, organisational culture and internal corporate governance were second-order constructs which were measured by several first-order constructs. For the former, organisational culture, the first-order constructs were *autonomy, external orientation, inter-departmental coordination, human resource management,* and *improvement orientation*. For the latter, internal corporate governance, the first-order constructs were duties of *board of commissioners*, duties of *independent commissioners*, duties of *audit committee*, duties of *board of directors*, duties of *internal control group*, and *codes of conduct*. In evaluating model fit of the second-order constructs, the goodness-of-fit indices were applied, including CFI (Comparative Fit Index) (Gerbing, Hamilton, and Freeman 1994). This index is similar to the RNI (Relative Non-centrality Index) of Marsh (Marsh 1994). The benchmarks of such indices are equal to those that were applied to the first-order constructs.

The structural part permits relationships between constructs to be examined. It is also possible and often desirable to include observed variables as part of the structural model. As the objective of SEM is to show that the paths of the model are plausible given the sample data (Gefen, Straub, and Boudreau 2000), the goodness-of-fit indices were again applied. Among many others, the χ^2, *p*-value, Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Root Mean Square Error of Approximation (RMSEA), and Comparative Fit Index (CFI) were used to indicate that the operationalisation of the theory being observed was verified and not disconfirmed by the data collected for this study.

4.7 Back-translation Process

The research instrument of this study was initially developed from organisational studies conducted in western countries, while this research was conducted in Indonesia. Consequently, the instrument needed to be translated from English to Bahasa Indonesia. Several techniques were available for translation, such as direct translation, back-translation, parallel translation and a mixed technique (Usunier 1998); each has advantages and disadvantages. This study chose the back-translation technique as it is widely used to reach lexical and idiomatic equivalence. Under this

procedure, two translators were invited, one a native speaker of the source language and the other a native speaker of the target language[20]. One translator translates from the source (English) language into a target (Bahasa Indonesia) language. Another translator translates the first translator's target language back into the source language. The results then are compared. The researcher of this study then invited the two translators to discuss and prepare the instrument into the final target-language. As back-translation is not a perfect method, the study proceeded with pre-test or pilot studying to reach a satisfactory level of reliability on conceptual and measurement equivalence (Sin, Cheung, and Lee 1999; Usunier 1998).

4.8 Other Methodological Issues

4.8.1 Common Method Variance

As stated in section 4.5, the study collected the data concerning multiple constructs from a single source using a questionnaire. As a result, a common method variance, which is defined as 'variance that is attributable to the measurement method rather than to the constructs the measure represent' (Podsakoff et al. 2003, p. 879), was likely to emerge. Self-report bias is not the only form of common method bias; other biases may emerge such as item characteristics effects, item context effects, and measurement context effects (Podsakoff et al. 2003) as a result of using a questionnaire in collecting the data. Despite many studies having revealed the dilemma of doing research with common method variance and self-report data (Avolio, Yammarino, and Bass 1991; Podsakoff and Organ 1986; Podsakoff et al. 2003), organisational researchers believe that self-report was and still is a method to collect the data. In dealing with common method biases and self-report problems, assessment of the research procedure is without doubt needed. Thus, it is reasonable that this study used approaches that mitigate the magnitude of the problem inherent with such data as much as possible.

To overcome the bias, the study followed the advice of Podsakoff et al. (2003) by allowing respondents not to write their details, making sure respondents knew that there were no right and wrong answers, and asking them to respond as honestly as

[20] The native speaker of the source language was an Australian student of the Linguistics Department in the Faculty of Cultural Sciences of Gadjah Mada University in Indonesia. The native speaker of the target language was an Indonesian who lectures at the English Department in the Faculty of Cultural Sciences of Gadjah Mada University in Indonesia; he holds a Graduate Diploma and Master of Arts TESOL from a university in Australia.

possible. Further, to diminish method biases, the study employed different scale format predictors and criterion measures. Additionally, this study pursued the recommendations of Tourangeau et al., cited in Podsakoff et al. (2003, p. 888), who suggest that the researcher:

> (a) define ambiguous or unfamiliar terms; (b) avoid vague concepts and provide examples when such concepts must be used; (c) keep questions simple, specific, and concise; (d) avoid double-barreled questions; (e) decompose questions relating to more than one possibility into simpler, more focused questions; and (f) avoid complicated syntax.

To complete the efforts to diminish method biases, it is possible to use statistical remedies, such as Harman's single-factor test, partial correlation procedure, controlling for the effects of a directly measured latent methods factor, controlling for the effects of an unmeasured latent methods factor, and multiple method factors (Podsakoff et al. 2003). However, each of these techniques has particular potential problems, which means there is no single best method for overcoming common method variance problems. It is for this reason that Nathan P. Podsakoff and Organ (1986, p. 540) argued, '…we strongly recommend the use of procedural or design remedies for dealing with common method variance problem as opposed to the use of statistical remedies or post-hoc patching up'. Further, if placed in the continuum of single-source effects, this study, with its characteristics of identical source, single instruments and different constructs, can not be positioned at the end of the continuum where it is most likely that the covariation deviates from the true score correlation (Avolio, Yammarino, and Bass 1991). In sum, as 'there is no substitute for careful research design' (Kline, Sulsky, and Rever-Moriyama 2000, p. 418), the current study sought to ensure that common method variance did not appear in the first place by implementing the above procedural recommendations.

4.8.2 Wording and Ordering the Questions

As the longer the list of items, the more likely respondents will experience fatigue (Alreck and Settle 1995), the wording and ordering of the questions be carefully planned. Fatigue in the form of responding carefully to the earlier items and carelessly to later ones can be minimised by writing questions that are as short and simple as possible, and positioning the relatively less important questions in the later part of research instrument. For this reason, the longest question in the research instrument used by this study was 18 words, which is less than Sekaran's (2000)

recommendation of 20 words. Further, the demographics questions were asked in the last part of the research instrument.

4.9 Summary

This chapter discussed the research procedures applied in this research. Firstly, the instrument development section presents the reasoning behind the utilisation of a six-point scale and the structure of the questionnaire, followed by a discussion of the constructs used in this study and their treatment in past literature. A combination of several indicators from past research was used to build the organisational construct. In regard to the internal corporate governance construct, this construct is considered to be new. A literature review of this construct was supplemented with the results of interviews that were carried out with several experts of on governance in Indonesia. Meanwhile, the organisational performance construct, which is perceptual in nature, was adapted from previous studies.

Secondly, with regard to instrument validation, qualitative and quantitative validations were carried out. Two pilot studies were performed and feedback was utilised to improve the research instruments. The sample selection process took account of the fact that the topic of research has been of interest to middle- and upper-levels of management. Hence, using the purposive sampling technique, the research approached institutions which run training and masters degree programs for middle- and upper-levels managers.

Thirdly, data analysis, including the treatment of missing values, the procedure for performing factor analysis, and the procedure for performing SEM analysis were also presented. Two types of SEM – variance and covariance based – were discussed, as was the LISREL software used in this research. Other research design and methodological issues such as the back-translation process, common method variance, the wording and ordering of questions were also discussed in this chapter.

Chapter 5: Pilot Study

5.1 Introduction

This study employed a questionnaire as a means of collecting data. As a research instrument, a questionnaire needs to be verified before it is brought to the actual survey. Chapter 5 describes the pilot study and therefore is designed to show the processes of validating the research instrument, which included pre-test and pilot study. A discussion of how the research instrument was developed, including a review of the literature that emphasises the content of this study's constructs, has been presented in Chapter 4. In the pre-test stage, this process was followed by the interview of several experts on organisational behaviour and corporate governance in Indonesia, as the study was carried out there. The pre-test is the qualitative validation procedure in which experts and practitioners are invited to give feedback upon whether items in the questionnaire belong to the constructs being studied. The feedback obtained and the revisions carried out during the pre-test stage are presented in this chapter. Next, the pilot study is presented in this chapter. The pilot study is the quantitative validation in which two pilot studies were conducted upon surrogate respondents. Discussion relating to the revision of the research instrument is included in this section. This section also presents the demographic characteristics of participants in the pilot studies. Lastly, the results of the reliability tests and the procedures for improving the item reliability are discussed.

5.2 Pre-Test

One procedure to improve a research instrument is pre-test or qualitative validation. During the pre-test stage, the draft of the research instrument was sent to four experts in the fields of organisational behaviour and corporate governance in Indonesia. In particular, the internal corporate governance research instrument needed major adjustments as a consequence of its observing two-tier board systems. By contrast, the organisational culture and organisational performance research instruments did not need any modification at this stage. The involvement of these scholars was based on the fact that the Indonesian corporate governance system is different compared to western systems, and therefore the initial questionnaire, which was based mostly on literature about corporate governance systems in western countries, needed to be

adjusted. These experts were given ten days to review the draft of the research instruments.

To obtain thorough feedback relating to the research instruments, interviews were then scheduled. In the interview stage, two other experts in corporate governance were invited. The direct interviews were all conducted in Indonesia during the fieldwork for this study. Each of the experts was interviewed for approximately 40 to 60 minutes, and the researcher verbally asked (*semi-structured*) questions and wrote the answers on paper (See Appendix 1 for Interview Guide). A week after the interviews were carried out, a researcher sent notes from the interviews to the six experts in organisational behaviour and corporate governance, allowing them to give feedback before the notes were incorporated into the draft of research instruments. After incorporating the notes into draft of the research instruments, the questionnaire was finally delivered to respondents for pilot study 1.

Feedback given by the six experts in organisational behaviour and corporate governance indicated that the items of western countries' internal corporate governance drawn from western literature did not exactly match Indonesia's internal corporate governance system. In particular, the experts pointed out that the codes of corporate governance (NCCG 2001, 2004), and the Law on Limited Liability Company, Law No 1 of 1995, were the main literature relating to Indonesian corporate governance. Therefore, item adjustments were performed, and they were changed to reflect the domain of internal corporate governance within Indonesia. Further, the layout of the questionnaire was improved based on the feedback of these experts.

Significant changes were carried on the Board of Directors and Executive Management subconstructs. First, the name Board of Directors (BOD), with reference to a governance structure or an organ of a corporation that is tasked to supervise and give advice to executive management of the company, is not recognised by Indonesian corporate governance literature. Second, the name Executive Management (EM) refering to a governance structure or an organ of a corporation, is also not officially used by the Indonesian corporate governance literature. The main literature sources, Indonesian Company Law 1995 and the Code for Good Corporate Governance, officially used the terms Board of Commissioners (BOC) instead of Board of Directors (BOD) and Board of Directors (BOD) instead of Executive Management (EM) in naming the governance structures or organs of

Indonesian companies. As a result, the name Board of Directors (BOD) was replaced with Board of Commissioners (BOC), and the name Executive Management (EM) is replaced with Board of Directors (BOD). Third, the tasks of this BOD needed to be adjusted to represent the actual tasks of BOC in Indonesia. The initial BOD items, based on literature of internal corporate governance from western countries, are presented in table 5.1 below.

Table 5.1: Initial of Board of Directors (BOD) items based on Western Corporate Governance Literature

No.	Items	Notes
1	BOD protects the interests of shareholders	• Partly observed by items 1 and 2 of revised version.
2	BOD protects the interests of stakeholders	• As for item 1
3	BOD creates an ethical environment	• Maintained in item number 7 of revised version.
4	BOD establishes specialised committees as needed (e.g. audit, compensation, nomination)	• Maintained in item 11 of revised version.
5	BOD runs specialised committees as needed to provide additional support and expertise	• Partly observed by item 11 of revised version.
6	BOD monitors specific controls and their efficacy on an ongoing basis	• Captured by items 5 and 6 of revised version.
7	BOD develops communications reporting links with internal control groups	• Captured by items 8 and 9 of revised version.
8	BOD oversees the general commercial affairs of the corporation	• Captured by items number 1, 8 and 9 of revised version.
9	BOD oversees the strategic performance goals of the corporation	• As for item 8
10	BOD oversees the business performance goals of the corporation	• As for item 8
11	BOD defines strategy as related to corporate goals	• Partly observed by item 2 of revised version.
12	BOD defines strategy as related to business and financial targets	• As for item 11
13	BOD defines strategy as related to financial and operating risk tolerance	• As for item 11
14	BOD provides for appropriate crisis management planning	• As for item 11
15	BOD develops director succession plans	• Partly observed by item 11 of revised version.
16	BOD develops executive management succession plan	• Partly observed by items 10 and 11 of revised version.
17	BOD implements director succession plans	• Partly observed by item 11 of revised version.
18	BOD implements executive management succession plan	• Partly observed by items 10 and 11 of revised version.
19	BOD develops executive compensation plan	• As for item 18
20	BOD implements executive compensation plan	• As for item 18

21	BOD considers in detail all corporate control activity (e.g. potential mergers, acquisitions, or buyouts)	• Partly observed by item 3 of revised version.
22	BOD considers in detail all possible defences	• As for item 21
23	BOD monitors the performance of management	• Partly observed by items 1, 2, 3, 6, 8, and 9 of revised version.
24	BOD effects changes when necessary	• Not observed
25	BOD ensures financial disclosure accurately represents the company's position	• Partly observed by item 4 of revised version.
26	BOD communicates regularly with key shareholders	• Not observed
27	BOD communicate regularly with regulators	• Not observed

Replacements were made to incorporate references that represented internal corporate governance within Indonesia. As table 5.1 shows, the number of items of the initial version was 27, while in table 5.2, which was developed based on literature addressing Indonesian internal corporate governance, the number of items was only 11. The nature of the tasks of Boards of Commissioners in Indonesia is relatively different to those operating in western systems of corporate governance. In Indonesia, the Board of Commissioners (BOC) plays a relatively passive role as stated in Indonesian Company Law 1995. Since the study was conducted in Indonesia, the use of words derived from Indonesian corporate governance literature and familiar to respondents was very important. Accordingly, major revisions were carried out based on the references shown in Chapter 4 section 4.3 (Development of Instruments).

Table 5.2: Revised Board of Commissioners' (BOC) items based on Indonesian Corporate Governance Literature

No.	Items
1	BOC supervises the action of BOD
2	BOC gives advice to BOD when required
3	BOC ensures that BOD complies with Articles of Association
4	BOC ensures that BOD complies with regulations having the force of law
5	BOC draws-up minutes of each BOC meeting
6	BOC ensures that BOD reads minutes of each BOC meeting
7	BOC creates an ethical environment
8	BOC ensures that BOD protects the interests of shareholders
9	BOC ensures that BOD protects the interests of stakeholders
10	BOC ensures that BOD applies a transparent system for the recruitment of executives other than members of BOD
11	BOC establishes certain committees as needed (e.g. audit, compensation, nomination, renumeration, risk, etc.)

For the same reasons, a similar revision was performed to the items within the domain of Executive Management. The name was changed from Executive Management to Board of Directors (BOD), and the items that characterise the tasks of Boards of Directors in Indonesia were used. The initial Executive Mangement items that were developed prior to fieldwork are shown in table 5.3 below.

Table 5.3: Initial Executive Management items based on Western Corporate Governance Literature

No.	Items	Notes
1	EM manages the firm's operating activities on a daily basis	• Captured by item 2 in revised version.
2	EM manages the firm's financing activities on a daily basis	• As for item 1
3	EM manages the firm's corporate activities on a daily basis	• As for item 1
4	EM is accountable to BOD for progress and performance	• Captured by item 12 in revised version.
5	EM creates tactical business plans in conjunction with BOD	• As for item 4
6	EM creates operating strategy in conjunction with BOD	• As for item 4
7	EM manages the results and adjusts them as necessary	• Captured by items 2, 3 and 4 in revised version.
8	EM defines the firm's short-term financial goals	• Captured by items 1, 2, 3 and 4 in revised version.
9	EM defines the firm's long-term financial goals	• As for item 8
10	EM manages the firm's short-term financial goals	• As for item 8
11	EM manages the firm's long-term financial goals	• As for item 8
12	EM defines financial and operating risk exposure in conjunction with BOD	• Captured by items 3, 4 and 10 in revised version.
13	EM monitors financial risk exposure in conjunction with BOD	• As for item 12
14	EM monitors operating risk exposure in conjunction with BOD	• As As for item 12
15	EM endures internal controls are in place and functioning properly	• Captured by item 10 in revised version.
16	EM ensures all such controls are independent of business units	• Partly observed by item 13 in revised version.
17	EM provides the BOD with timely financial data and any other information directors deem necessary	• Captured by item 14 in revised version.
18	EM provides the BOD with useful financial data and any other information directors deem necessary	• As for item 17
19	EM communicates regularly with internal parties on items of corporate importance	• Captured by item 16 in revised version.

20	EM communicates regularly with external parties on items of corporate importance	• Not observed
21	EM ensures transparency in the financial frameworks of the firm	• Captured by item 17 in revised version.
22	EM ensures transparency in the operating frameworks of the firm	• Not observed
23	EM creates a proper human resource management function and framework	• Captured by item 8 in revised version.
24	EM delegates authority internally to hire and fire workers	• Captured by item 8 in revised version.
25	EM promulgates a code of conduct and other board directives/policies	• Captured by item 9 in revised version.
26	EM enforces a code of conduct and other board directives/policies vigorously	• As for item 25

Among the 26 items of the early version of the internal corporate governance itemas as shown in table 5.3, in principle, these were not significantly different to the 17 items of Indonesian internal corporate governance presented in table 5.4. However, as the latter are recognisable to the respondents of this study, and considering the regulatory references cited in detail in Chapter 4 section 4.3 (Development of Instruments), the first version was adjusted and changed; the latter version is shown in the following table.

Table 5.4: Revised Board of Directors (BOD) items based on Indonesian Corporate Governance Literatures

No.	Items
1	BOD defines strategy of the company
2	BOD manages the implementation of strategy of the company
3	BOD protects the interests of shareholders
4	BOD protects the interests of stakeholders
5	BOD complies with the Articles of Association of the Company
6	BOD complies with regulations having the force of law
7	BOD creates an ethical environment
8	BOD creates a proper human resource management function
9	BOD enforces codes of conduct
10	BOD establishes internal control system to safeguard the company assets
11	BOD draws-up minutes of each of BOD meeting
12	BOD ensures that BOC reads minutes of BOD meeting
13	BOD advises the audit committee when it seeks a second opinion on an accounting issue
14	BOD ensures that BOC has access to information about the company
15	BOD provides shareholders with full and accurate information about the company
16	BOD communicates with internal parties on items of corporate importance
17	BOD ensures transparency in the financial framework of the company

Based on the Code of Good Corporate Governance Ref. 4.0 published by NCCG in 2001 and the other sources of Indonesian corporate governance (e.g. Daniri 2005), the alteration of items pertaining to internal control groups was conducted. The initial version, developed before fieldwork commenced, was solely based on western literature. This version is presented in table 5.5 below.

Table 5.5: Initial Internal Control Group items based on Western Corporate Governance Literatures

No.	Items	Notes
1	ICG create policies to support independent control of finance, audit, risk management, operations, and compliance	• Complex question. • Needs to be simplified. • Replaced with item 4 of revised version.
2	ICG creates procedures to support independent control of finance, audit, risk management, operations, and compliance	• As for item 1
3	ICG updates regularly the board of directors on the status of, and substantive changes in, all control issues	• Replaced with items 2 of revised version.
4	ICGs update regularly the board of committees on the status of, and substantive changes in, all control issues	• As for item 3
5	ICG reviews all aspects of the company's business and control process and infrastructure on a continuous basis, with a special focus on potential weaknesses that could create losses or problems	• Complex question. • Needs to be simplified. • Replaced with item 1 of revised version.
6	ICG audits all aspects of the company's business and control process and infrastructure on a continuous basis, with a special focus on potential weaknesses that could create losses or problems	• As for item 5
7	ICG ensures substantive audit findings are elevated and resolved	• Maintained. • In line with NCCG (2001)
8	ICG prepares all relevant corporate information (such as financial statements and risk profile) for internal parties	• Complex questions. • Needs to be simplified • Replaced with item 3 of revised version.
9	ICG disseminates all relevant corporate information (such as financial statements and risk profile) to internal parties	• As for item 8
10	ICG prepares all relevant corporate information (such as financial statements and risk profile) for external parties	• As for item 8
11	ICG disseminates all relevant corporate information (such as financial statements and risk profile) for external parties	• As for item 8

12	ICG prepares, tests, and implements crisis management plans related to business interruption/disaster recovery	• Replaced with item 1 of revised version.
13	ICG ensures compliance with applicable regulatory requirements and reporting	• Maintained. • In line with NCCG (2001)
14	ICG works with external auditors on continually reviewing and strengthening controls	• Replaced with item 1 of revised version.

Having analysed the feedback from the pre-test stage and the literature review of Indonesian corporate governance (chapter 4 section 4.3), amendments were made. The fourteen items that were the questions in the early version, as illustrated in table 5.5, were reduced to 5 items derived from Indonesian corporate governance literature, as demonstrated in table 5.6. In essence, both versions were directed to the control processes of managing and supervising the company; however, the new version had regulatory support and and was more recognisable to Indonesian companies.

Table 5.6: Revised Internal Control Group items based on Indonesian Corporate Governance Literatures

No.	Items
1	ICG creates policies to secure the assets of the company
2	ICG creates policies to increase the operational efficiency and effectiveness of the company
3	ICG develops the reliability and the comprehensiveness of accounting/financial information
4	ICG ensures the compliance with applicable policies and regulatory requirements
5	ICG ensures substantive audit findings are elevated and resolved

Relating to codes of conduct, revisions were performed to avoid complexity and to avoid double-barreled items (Zikmund 2003) and to add one item that was emphasised by the Code of Good Corporate Governance in Indonesia (NCCG 2004). The initial version is presented in table 5.7 below.

Table 5.7: Initial items of Codes of Conduct based on Western Corporate Governance Literatures

No	Items	Notes
1	My company has codes of conduct which create an environment, policies, and procedures where internal conflicts of interest are avoided or eliminated	• Complex question (environment, policies, and procedures). • Needs to be simplified.

2	My company has codes of conduct which create an environment, policies, and procedures where external conflicts of interest are avoided or eliminated	• Complex question (environment, policies, and procedures). • Needs to be simplified.
3	My company has codes of conduct which make certain that employees do not engage in corrupt practices or other activities that might prejudice or jeopardise the firm's reputation	• Double-barreled items: 1. corrupt practices 2. other activities • Split into two items
4	My company has codes of conduct which treat all stakeholders, including suppliers, clients, employees, and others, fairly and honestly	• Complex question (suppliers, clients, employees, and others). • Needs to be simplified.
5	My company has codes of conduct which develop mechanisms where violations of company policy can be reported without fear of retribution	• Maintained in the revised version. • In line with NCCG (2004)

In terms of complexity, items that contained the words 'environment, policies, and procedures' were simplified, with these three words being replaced with the word 'environment'. In terms of double-barreled items, item number three was split into two different questions: one was an item relating to corrupt practices and the other was concerned with activities that prejudice the firm's reputation. Lastly, one item was added concerning obeying the decisions of company organs (items 7 of table 5.8). The revised items are shown in table 5.8 below.

Table 5.8: Revised items of Codes of Conduct based on Indonesian Corporate Governance Literatures

No.	Items
1	My company has codes of conduct which create an environment where conflicts of interest are avoided or eliminated
2	My company has codes of conduct where people do not engage in insider trading for the benefit of individual interest
3	My company has codes of conduct which make certain that no one engages in corrupt practices
4	My company has codes of conduct which make certain that no one engages in activities that jeopardise the company's reputation
5	My company has codes of conduct which treat all stakeholders fairly and honestly
6	My company has codes of conduct which develop mechanisms where violations of company policy can be reported without fear of retribution
7	My company has codes of conduct which create an environment in which the decisions of companys organs are obeyed

Other constructs that are part of the Indonesian governance structures or organs, namely audit committees and independent commissioners were investigated.

Both are highlighted by the NCCG as important governance structures of internal corporate governance in Indonesia, as regulated by the *Bapepam* (The Stock Exchange Supervisory Body) circular letter No: *SE-03/PM/2000* and the Jakarta Stock Exchange Director's decree No. *Kep-315/BEJ/06-2000* (relating to audit committees), and the Jakarta Stock Exchange Director's decree No. *Kep-315/Bursa Efek Jakarta/ 06-2000* (relating to independent commissioners). The audit committee items are presented in table 5.9 and the independent commissioners items are shown in table 5.10.

Table 5.9: Items of Audit Committee Construct based on Indonesian Corporate Governance Literature

No.	Items
1	AC oversees financial reports, ensuring they follow the Indonesian Accounting standard
2	AC monitors the external auditor's audit of financial report
3	AC monitors the process of managing risk
4	AC ensures that the report of internal auditor considers risk management
5	AC ensures that BOD complies with recommendations relating to risk management
6	AC creates disciplines and control which lessen the possibility the company being jeopardised
7	AC empowers internal audit
8	AC promotes adequate structures of internal control
9	AC improves the quality of financial disclosure and reporting
10	AC reviews the scope, accuracy, and cost-effectiveness of external audit
11	AC reviews the independence and objectivity of external auditor
12	AC acts as communication channel between external auditors and BOC
13	AC reviews the results of external audit

Table 5.10: Items of Independent Commissioners (IC) Construct based on Indonesian Corporate Governance Literature

No.	Items
1	IC ensures that BOD defines business strategy of the company
2	IC ensures that company hires professional managers
3	IC ensures that company establishes communication reporting link
4	IC ensures that company establishes control system
5	IC ensures that company establishes audit system
6	IC ensures that company complies with regulations
7	IC ensures that company manages risk
8	IC ensures that company provides transparent financial reporting
9	IC ensures that company treats minority shareholders fairly and honestly
10	IC ensures that company discloses transactions that have conflicting interests
11	IC ensures that company organs are accountable

5.3 Pilot study

The pilot testing is carried out to improve the internal validity of a questionnaire – the ability of a research instrument to measure what it is purported to measure. Cooper and Schindler (2008, p.91) claimed that 'this important activity has saved countless surveys studies from disaster by using the suggestions of the respondents to identify and changing confusing, awkward, or offensive questions and techniques'. Further, the pilot testing help researcher in deciding whether the time taken to complete the questionnaire is reasonable, whether each question gives an adequate range of responses, and whether the questions need to be re-worded or re-scaled, shortened and revised.

5.3.1 Pilot study 1

Subsequent to the pre-test, another procedure for validating the research instrument was performed, this was the pilot study. Colleagues, respondent surrogates, or actual respondents can be used to identify weaknesses in the research instrument. In this case, the pilot study was conducted twice. In pilot study 1, questionnaires were distributed to 30 surrogate respondents who were employees of the State Owned Company participating in two-month training programs delivered by the Centre for Management Research and Development in the Faculty of Economics at Gadjah Mada University in Indonesia. They came from different branches of this company in Indonesia. Participation was voluntary and respondents were assured that a summary of the study would be given to those who requested one. To facilitate respondents to answer the questions, a free Curtin-marked ballpoint pen was offered to them. The respondents filled in the questionnaire in approximately 20 to 30 minutes. One-hundred per cent of the responses were collected during this pilot study.

In terms of instrument validation, the respondents of Pilot Study 1 revealed that item 2 of the autonomy construct (a subconstruct of the organisational culture construct) was perceived as having negative connotations. They believed the words ‘there is freedom for employees to depart from rules’ when translated to Bahasa Indonesia would be associated with disobedience or rebelliousness. An amendment was conducted accordingly. The second revision was made to item 4 of the human resource management construct (a subconstruct of corporate culture construct). According to respondents, the translation of the word ‘competency’ in the sentence

‘job competency is the only criterion in hiring people’ to ‘ability to perform the job’ undermined the meaning of the item. Consequently, and based on the fact that the word ‘competency’ was common in business terminology in Indonesian language, ‘competency’ was not translated to another word. Other revisions included changing the general instruction from ‘giving a thick to the box’ to ‘giving a circle to correct answer’.

5.3.2 The Demographic Characteristics of Pilot study 1

Table 5.11 below shows the demographic composition of respondents. Relating to gender of respondents, 36.7 per cent were female and 63.3 per cent were male. Of the respondents, none were under 30 years of age, 80 per cent were between 30 and 40, 16.7 per cent were between 40+ and 50, 3.3 per cent were between 50+ and 60, and none were above 60 years old. Further, most of the respondents (56.7 per cent) had worked for their company for 10+ to 15 years. Twenty per cent of them had been in the company for 15+ to 20 years, 16.7 per cent for 5+ to 10 years, and those who had been in the company for less than 1 year and more than 20 years shared the same percentage of 3.3 per cent. One conclusion from these two last features is that respondents were mature enough to be asked about questionnaire items which related to their knowledge about their company. Since the respondents were from the same company it is not surprising that the type of business and type of ownership were 100 per cent service business and 100 per cent owned by the state. In terms of the department in which respondents were working, 40 per cent were in the finance/accounting department, 3.3 per cent in the marketing department, 36.7 per cent in the production/operation department, 0 per cent in the human resource department, and 20 per cent came from departments other than those mentioned in the questionnaire.

Table 5.11: Demographic Characteristics of Pilot study 1 Respondents

Demographic Characteristics	Percentage
Gender:	
▪ Female	36.7%
▪ Male	63.3%
Age Group:	
▪ Under 30	-
▪ 30+ to 40	80%
▪ 40+ to 50	16.7%
▪ 50+ to 60	3.3%
▪ 60+	-
How long have you worked in the current company?	
▪ Less than 1 year	3.3%
▪ 1 to 5 years	-
▪ 5+ to 10 years	16.7%
▪ 10+ to 15 years	56.7%
▪ 15+ to 20 years	20%
▪ More than 20 years	3.3%
What type of business is your company in?	
▪ Service Business	100%
▪ Manufacturing Business	-
▪ Others	-
Under what type of ownership is your company classified?	
▪ Private Business	-
▪ Public/State Owned Enterprise Business	100%
What department are you in?	
▪ Finance/Accounting	40%
▪ Marketing	3.3%
▪ Production/Operation	36.7%
▪ Human Resource	-
▪ Others (corporate secretary, internal auditors, communication, and general managers)	20%

5.3.3 Reliability Pilot study 1

The draft of the research instrument was subject to tests in order to have them free from error measures and therefore obtain consistent results. In this study, the main concern was the homogeneity of the measure, as reflected by the Cronbach's alpha in tests using SPSS Software. This alpha shows the degree to which instruments' items are homogeneous and reflect the same underlying construct(s) (Zikmund 2003). In this section, all constructs were examined and the procedure of improving the reliability was performed. The results presented in table 5.12 illustrate that all but three constructs had an alpha higher than 0.7. Generally, the lower acceptance limit of Cronbach's alpha is .60 to .70 (Hair et al. 1998). The three constructs which had

alphas less than .70 were *Autonomy, Human Resource Management* and *Audit Committee,* with scores of .676, .654 and .389 respectively. These scores indicated some problems in the items of the three constructs above.

Table 5.12: Reliability Analysis Results – Pilot study 1

Organisational Culture		
No.	**Construct**	**Alpha**
1	*Autonomy (Auto)*	.676
2	*External Orientation (EO)*	.708
3	*Inter-Departmental Coordination (IDC)*	.769
4	*Human Resource Management (HRM)*	.654
5	*Improvement Orientation (IO)*	.795
Internal Corporate Governance		
No.	**Construct**	**Alpha**
1	*Board of Commissioners (BOC)*	.920
2	*Independent Commissioners (IC)*	.925
3	*Audit Committee (AC)*	.389
4	*Board of Directors (BOD)*	.941
5	*Internal Control Group (ICG)*	.804
6	*Codes of Conduct (COC)*	.860
Organisational Performance		
No.	**Construct**	**Alpha**
1	*Organisational Performance (OP)*	.854

The SPSS output shown in table 5.13 revealed that deleting item auto2 would have increased the alpha to .766. By deleting item hrm4 the alpha would have been .771. Both exceeded the benchmark of .7. There were other scenarios of deleting other items, but overall only deleting auto2 and hrm4 would have brought higher alphas. As 'a poorly worded item' (Hulland 1999, p. 198) may produce low loading, rather than deleting these items, it is worth examining them closely, to discover whether there was inappropriate wording and/or translation.

Table 5.13: Reliability Analysis AUTO and HRM

Item-Total Statistics (AUTO)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
auto1	16.9000	14.921	.502	.597
auto2	18.3000	23.390	-.189	.766
auto3	16.7000	15.459	.525	.591
auto4	16.1000	14.162	.676	.532
auto5	16.0667	14.892	.480	.606
auto6	15.1000	17.266	.402	.636

Item-Total Statistics (HRM)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
hrm1	25.5667	15.909	.582	.559
hrm2	25.6333	15.275	.689	.529
hrm3	25.5000	13.017	.790	.463
hrm4	27.3333	22.161	-.162	.771
hrm5	25.8667	17.292	.318	.633
hrm6	25.3333	17.540	.447	.602
hrm7	26.5667	17.771	.195	.677

The process of translating the research instrument was performed carefully; however, it was still possible to have had an unsuitable translation, particularly if the research was being carried out in a different context to that of the translator. Having analysed the item closely it was acknowledged that there was translation ambiguity. This was also the feedback from respondents, who asked what the true meaning of this item was, as described in the first part of the pilot study above. Since one of the purposes of the pilot study was to refine the research instrument and take into account the suggestions of experts in organisational behaviour in Indonesia, rewording the item was the final choice of this study, as seen in table 5.14.

Table 5.14: Revision Procedure for Items AUTO and HRM

Revision for item auto2

Original (English)
- There is freedom for employees to depart from rules

Initial Translation (*Bahasa Indonesia*)
- *Ada kebebasan bagi karyawan untuk menyimpang dari peraturan*

Revised Translation (Bahasa Indonesia)
- *Untuk kepentingan perusahaan pada saat yang diperlukan, karyawan diperbolehkan untuk tidak mengikuti peraturan secara ketat*

Revision of item hrm4

Original (English)
- Job competency is the only criterion in hiring people

Initial Translation (*Bahasa Indonesia*)
- *Kemampuan melaksanakan pekerjaan adalah satu-satunya ukuran yang dilihat dalam pemilihan karyawan baru*

Revised Translation (*Bahasa Indonesia*)
- *Kompetensi melaksanakan pekerjaan adalah satu-satunya criteria dalam merekrut karyawan baru*

In terms of the Internal Corporate Governance construct, one subconstruct had an alpha lower than the benchmark, namely Audit Committee, with an alpha of .389. Table 5.15 suggested that it was possible to increase the alpha by deleting item ac12 which gave a new score of .884. Examining the translation to Bahasa Indonesia of the original research instrument, which was written in English, there was no translation ambiguity. Considering that low reliability may be caused by 'an improper transfer of an item from one context to another' (Hulland 1999, p. 198), which leads to non-generalisability, and regarding it as an important item in Indonesian internal corporate governance, pilot study 1 maintained the item to be used in pilot study 2. If the problem of low reliability occurred in the second test, then it would have been worth deleting the item from the final questionnaire.

Table 5.15: Reliability Analysis AC

Item-Total Statistics (AC)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ac1	58.1034	149.667	.253	.374
ac2	58.4483	147.828	.290	.367
ac3	58.6897	144.793	.273	.357
ac4	58.7586	146.118	.250	.363
ac5	58.8621	140.552	.462	.334
ac6	58.6897	145.293	.373	.355
ac7	58.6207	146.315	.405	.358
ac8	58.6207	144.387	.452	.350
ac9	58.6207	144.815	.458	.351
ac10	58.7241	144.207	.445	.349
ac11	58.7586	144.404	.432	.350
ac12	57.0690	50.852	.105	.884
ac13	58.5862	144.680	.509	.350

5.3.4 Pilot study 2

The respondents of pilot study 2 were employees or manager or executives of companies who had enrolled in the Magister Management Program at Gadjah Mada University[21]. Again, participation in this pilot study was voluntary. The reward offered to respondents was a summary of the study for those who requested one. A free Curtin-marked ballpoint pen was offered to respondents to spur them answer the questions. The respondents filled out the questionnaire in approximately 20 to 30 minutes. Forty-five respondents were invited, and 42 responses were collected, which accounted for a 93.3 per cent effective response rate. Based on feedback given in the second pilot study, amendments made were to change the layout of the questionnaire by limiting the breaking of items in one subconstruct into two different pages, and to change the font type from Times New Roman to Arial to create more space between lines.

[21] Magister Management Program in Indonesia is similar to Master of Business Administration in many western countries.

5.3.5 The Demographic Characteristics of Pilot study 2

The results of pilot study 2 are shown in table 5.16. Compared to pilot study 1, respondents were more heterogeneous, since they came from different organisations. As table 5.16 shows, 35 per cent of respondents were female and 64.3 per cent were male. Relating to age, more than half (57.1%) were under 30 years of age, 35.7 per cent were between 30 and 40, 4.8 per cent were between 40+ and 50, and only 2.4 per cent were between 50+ and 60, none are above 60 years old. Further, most (57.1%) had worked for their current company for 1 to 5 years, 16.7 per cent of respondents had been in their current company for less than 1 year, 11.9 per cent for 5+ to 10 years, and 9.5 per cent for 10+ to 15 years. Those who had been in their current company for 15+ to 20 years and more than 20 years shared the same percentage of 2.4 per cent. When the two last features are analysed it can be seen that respondents were mostly young employees, or managers or executives and none of them had been in their company for less than 1 year. It was deduced therefore that they could be asked about their understanding of their company, which the questionnaire sought to do. Of the 42 respondents, 29 or 67.4 per cent were working in service businesses and 6 or 14 per cent had been in manufacturing businesses, and the remaining 7 or 16.3 per cent were in businesses other than these. In contrast to pilot study 1, 57.5 per cent of respondents in pilot study 2 worked for the private sector and only 42.5 per cent had been in public or state-owned enterprises. In terms of department in which they were working, 20 per cent of respondents were in finance/accounting, 22.5 per cent were in marketing, 20 per cent were in production/operation, and only 2 per cent were in human resource, Thirty-two per cent were in a department other than those mentioned in the questionnaire.

Table 5.16: Demographic Characteristics of Pilot Study 2 Respondents

Demographic Characteristics	Percentage
Gender:	
▪ Female	35.7%
▪ Male	64.3%
Age Group:	
▪ Under 30	57.1%
▪ 30+ to 40	35.7%
▪ 40+ to 50	4.8%
▪ 50+ to 60	2.4%
▪ 60+	-

How long have you worked in the current company? ▪ Less than 1 year ▪ 1 to 5 years ▪ 5+ to 10 years ▪ 10+ to 15 years ▪ 15+ to 20 years ▪ More than 20 years	 16.7% 57.1% 11.9% 9.5% 2.4% 2.4%
What type of business is your company in? ▪ Service Business ▪ Manufacturing Business ▪ Others	 69% 14.3% 16.7%
Under what type of ownership is your company classified? ▪ Private Business ▪ Public/State Owned Enterprise Business	 57.5% 42.5%
What department are you in? ▪ Finance/Accounting ▪ Marketing ▪ Production/Operation ▪ Human Resources ▪ Other (corporate secretary, internal auditors, communication, and general managers)	 20% 22.5% 20% 2.5% 35%

5.3.6 Reliability Test Pilot Study 2

The results of the reliability tests for pilot study 2 are presented in the following table. It can be seen from the Cronbach's alpha coefficients that all constructs surpassed the point of reference of 0.7. The conclusion of these findings was that the research instrument was sufficient to be used for the final survey.

Table 5.17: Reliability Analysis Results – Pilot study 2

Organisational Culture		
No	**Construct**	**Alpha**
1	*Autonomy (Auto)*	.738
2	*External Orientation (EO)*	.794
3	*Inter-Departmental Coordination (IDC)*	.757
4	*Human Resource Management (HRM)*	.881
5	*Improvement Orientation (IO)*	.919
Internal Corporate Governance		
No	**Construct**	**Alpha**
1	*Board of Commissioners (BOC)*	.888
2	*Independent Commissioners (IC)*	.929
3	*Audit Committee (AC)*	.939
4	*Board of Directors (BOD)*	.915
5	*Internal Control Group (ICG)*	.859
6	*Codes of Conduct (COC)*	.911

Organisational Performance		
No	**Construct**	**Alpha**
1	*Organisational Performance (OP)*	.890

5.4 Summary

The importance of pilot studies has been highlighted by Cooper and Schindler (2003). Following their recommendations, this study performed two tests in pilot studies, namely a pre-test and pilot study, to detect weaknesses in design and instrumentation prior to the actual survey. The pre-test was a qualitative validation test in which feedback from experts was taken into account to improve the research instrument. In particular, changes to the internal corporate governance construct were carried out, referring to the most recent regulations and practices of corporate governance in Indonesia. The next phase was quantitative validation, which was performed twice: respondent from one company and Magister Management executive classes were invited to participate in pilot study 1 and pilot study 2 respectively. The pilot study 1 revealed that three out of 12 constructs had a problem of low reliability. As a consequence, amendments were made. In this regard, firstly, instead of deleting the items, the study preferred to rephrase the items (auto2 and hrm4) as inappropriate wording may contribute to lower loading. Secondly, the low reliability of one of the audit committee items (ac12) may have been the result of inappropriate language transfer. However, there was no evidence of translation ambiguity. Thus, the study maintained item ac12 while setting the requirement that the item would be deleted if it failed in the subsequent pilot study 2. The revised version of the research instruments was utilised for pilot study 2. The results showed that all constructs surpassed the thresholds of reliability values, and thus the research instrument was ready for use in the actual survey.

Chapter 6: Analysis of Results (Stage 1) – Survey Results and Factor Analysis*†

6.1 Introduction

The purpose of this chapter is to present the questionnaire survey results and to analyse the results of the survey using factor analysis. The first section provides the response rate and a general descriptive information of the survey respondents. The second section uses factor analysis as a data reduction technique to summarise the essential information contained in the variables employed in this study.

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* Part of this chapter has been presented at the following conferences:

Wibowo, A (2005), "The Impact of Organisational Culture and Internal Corporate Governance on Performance: A Conceptual Framework", in *International Seminar towards a New Indonesia*, (CD ROM), Faculty of Economics - Gadjah Mada University, Yogyakarta, 16-17 September.

Wibowo, A., Evans, R., and Quaddus, M (2007), "Does Organisational Culture Affect Organisational Performance? A Study of Indonesian Companies", in *Proceeding of the 7th Asian Academy of Management Conference,* eds. Nasurdin, A., Ibrahim, D.S., Osman, I., Haron, M.S., Hoo, Q.C., Ali, R., Ramayah, T., Zainuddin, Y. and Ahmad, Z.A., Asian Academy of Management and School of Management - Universiti Sains Malaysia, Malaysia, 21-25 May, pp. 242-251.

Wibowo, A., Evans, R., and Quaddus, M (2007), "The Impact of Internal Corporate Governance on Organisational Performance in Indonesian Companies", in *Proceeding of the 10th International Conference of the Society for Global Business and Economic Development,* eds. C. Jayachandran, K. Okachi, C. Chakraborty, R. Misra and R. Lord - Montclair State University and Ryukoku University, Kyoto, 8-11 August, pp. 3064-3084.

Wibowo, A (2007), "Application of Confirmatory Factor Analysis to the Study of Internal Corporate Governance Construct: A Higher-Order Factor Model", in *Curtin Business School Doctoral Students' Colloquium 2007* – Curtin University of Technology, Perth, 30-31 August.

Evans R., Quaddus, M., and Wibowo, A (2007), "Does Organisational Culture Affect Internal Corporate Governance? A Study of Indonesian Companies", in *Proceeding of the 21st ANZAM 2007 Conference,* (CD ROM), ed. Ross Chapman - University of Western Sydney, Sydney, 4-7 December.

† Part of this chapter has been accepted and will be presented in the following conference:

Wibowo, A., Quaddus, M., and Evans, R (2008), "Partial and Total Disaggregation Framework of a Second-order Construct in the Relationship of Organisational Culture and Internal Corporate Governance", in *7th European Conference on Research Methodology (ECRM) for Business and Management Studies*, Conference Chair Peter Sharp - Regent's College, London, UK, 19-20 June 2008.

6.2 Questionnaire Survey Results

6.2.1 Response Rate

Of the 1000 surveys sent to managers and executives, 669 were collected. This was equivalent to 66.9 per cent of initial response rate. However, of the 669 questionnaire returned, 173 were ineligible because of the incomplete response in more than three items in every construct's list of questions, and thus discarded. This resulted in 496 usable responses or 49.6 per cent effective response rate. According to Cooper and Schindler (2003), such figure was deemed satisfactory as it was well above 30 per cent.

6.2.2 Demographic Characteristics

Demographic characteristics of respondents in this study are summarised in Table 6.1 below. As the table shows, 21.8 per cent of respondents were female and 78.2 per cent were male. Of the respondents, 13.7 per cent were under 30 years of age, 47.2 per cent were between 30 and 40, 28 per cent were between 40+ and 50, 10.7 per cent were between 50+ and 60, and only 0.4 per cent were above 60 years old.

Table 6.1: Demographic Characteristics of Respondents

Demographic Characteristics		**Frequency**	**Percentage**
Gender:	▪ Female ▪ Male	108 388	21.8% 78.2%
Age Group:	▪ Under 30 ▪ 30+ to 40 ▪ 40+ to 50 ▪ 50+ to 60 ▪ 60+	68 234 139 53 2	13.7% 47.2% 28.0% 10.7% 0.4%
Tenure:	▪ Less than 1 year ▪ 1 to 5 years ▪ 5+ to 10 years ▪ 10+ to 15 years ▪ 15+ to 20 years ▪ More than 20 years	10 90 141 120 60 75	2.0% 18.1% 28.4% 24.2% 12.1% 15.1%
Type of Business	▪ Service Business ▪ Manufacturing Business ▪ Others	353 61 82	71.2% 12.3% 16.5%
Department:	▪ Finance/Accounting ▪ Marketing ▪ Production/Operations ▪ Human Resource Management ▪ Others (corporate secretary, internal auditors, communication, and general managers)	88 64 104 36 204	17.7% 12.9% 21.0% 7.3% 41.1%

Further, many respondents (28.4%) had worked for their current company for 5+ to 10 years, 24.2 per cent of respondents had been in their current company for 10+ to 15 years, 12.1 per cent of respondents had been in the current company for 15+ to 20 years, and 15.1 per cent of respondents had been in the current company for more than 20 years. Of those who had been in the company for 1 to 5 years and less than 1 year were 18.1 per cent and 2 per cent respectively. When the tenure features are analysed it can be seen that respondents were mostly experienced managers or executives. Thus, it was deduced that they could be asked about their understanding of their company, which the questionnaire sought to do.

Of the 496 respondents, 71.2 per cent were working in service business, and 12.3 per cent had been in manufacturing businesses, and the remaining 16.5 per cent were in businesses other than these. In terms of the department in which respondent were working, 17.7 per cent were in the finance/accounting department, 12.9 per cent in the marketing department, 21 per cent in the production/operation department, 7.3 per cent in the human resource department, and 41.1 per cent came from departments other than those mentioned in the questionnaire.

6.3 Factor Analysis

Observing the results of pilot study 1 and pilot study 2 there were 105 variables in this research. These large numbers of variables could have been a disadvantage of the study, as 'increasing the number of variables also increases the possibility that the variables are not all uncorrelated and representative of distinct concepts' (Hair et al. 1998 p. 91), and prohibits the subsequent analysis from being performed smoothly[22]. Gerbing and Hamilton (1996) recommended the use of exploratory factor analysis as it can contribute to a useful heuristic strategy for model specification prior to confirmatory factor analysis. It is for these reasons that factor analysis was carried out in this study. Performing factor analysis assists researchers in selecting a representative subset of variables while retaining the variables' original character.

Factor analysis 'is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarise the essential

[22] With such large numbers of variables, structural equation modelling demands a huge sample size. The requirement of sample size almost exponentially increases as variables are added. For details, see Holmes-Smith (2001).

information contained in the variables' (Coakes and Steed 1999 p. 147). As a multivariate statistical tool, factor analysis can be used to define the underlying structure in a data matrix and to determine whether items are tapping into the same construct. While there is the possibility of facing the 'garbage in, garbage out' phenomenon in factor analysis, this study prevented this from occurring by designing and developing the conceptual underpinnings of the variables from the beginning of the research (see chapters 4 and 5 for details). An example of previous study that utilised this method see Daale (2004).

6.3.1 Method of Analysis

Several methods of extraction are available for researchers. The SPSS software, for instance, has seven methods of extraction, namely principal component, unweighted least squares, generalised least squares, maximum likelihood, principal axis factoring, alpha factoring, and image factoring.

As the most-used methodology, principal component analysis followed by a varimax rotation was utilised in this study (Cool and Henderson 1997). This method was applied to every construct in this research. The objective of this approach was to have valid and reliable items that could be used for subsequent SEM analysis — to examine the impact of organisational culture and internal corporate governance on organisational performance in Indonesian companies.

6.3.1.1 Factor Analysis of Individual Construct

To perform factor analysis, the software of choice was SPSS 13.0 for Windows, which was released on 1 September 2004 (SPSS 2004). This software is widely used by researchers in the social sciences and in the professional arena for statistical analysis. Following the recommendation of Coakes and Steed (1999) the factor analysis of each construct went through the following steps:

a. Correlation matrix, to ensure that factor analysis is appropriately applied as correlations among items prevail. Inputs for determining the appropriateness of factor analysis are the correlation matrix, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA), Bartlett's Test of Sphericity (BTS), and the Anti-Images Matrix-Measure of Sampling Adequacy (AIM-MSA) matrix. Both KMO-MSA and BTS tests are to determine the factorability of the matrix as a whole. The matrix AIM-MSA provides information relating to

the negative value of partial correlation (printed on the off-diagonal) and a measure of sampling adequacy (printed on the diagonal). The thresholds for appropriateness of factor analysis are:

-	Correlation matrix:	0.3
-	Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA):	0.6
-	Bartlett's Test of Sphericity (BTS):	Large and significant
-	Anti-Image Matrix-Measure of Sampling Adequacy (AIM-MSA) matrix:	Small for AIM and 0.5 for MSA.

b. Factor extraction, to determine the number of factor(s) needed to represent the data. In this process, the computation and information of communalities, total variance explained-Eigenvalues, scree plot, and component matrix are required. Communalities refer to the total amount of variance an original indicator shares with all other indicators included in an analysis. The reason for applying total variance explained-Eigenvalues is that each factor should account for the variance of at least a single indicator if it is to be retained for interpretation (Hair et al. 1998). Scree plot shows the optimum number of factors that can be extracted prior to the amount of unique variance starting to dominate the common variance structure (Hair et al. 1998). A component matrix is a matrix of loadings or correlations between the indicators and a factor (Coakes and Steed 1999).

Requirements for these tests:

1. Communalities: High communalities are preferred to low ones, as the former indicates that the variables analysed have much in common with one another. Whilst no particular cut-off was available, the study set 0.5 as a lower limit of acceptable communalities.
2. Total variance explained-Eigenvalues: Select the factors with Eigenvalues greater than 1.
3. Scree plot: Select the factor(s) which lie above the value of Eigenvalues 1.

4. Component matrix: Select the loading 0.3 or greater. If possible choose the pure indicators. Pure indicators have loadings of 0.3 or greater on the *predominant* factor. It is possible that along with pure indicators, there will be complex indicators, where there are several high loadings on more than one factor. In the when pure and complex indicators emerge, the interpretation becomes difficult, and factor rotation is necessary.

c. Factor Rotation refers to the process of adjusting the factor axes to achieve a simpler and more meaningful factor solution. Among the two alternatives of rotation—oblique and orthogonal—the study applied orthogonal rotation based on the following reasons (Hair et al. 1998):

1. It is more appropriate to be applied in factor analysis in which the objective is to reduce the number of indicators.
2. It is widely used and available, most computer packages contain factor analysis.
3. Oblique rotation procedures are not well developed and subject to considerable controversy.

After choosing factor rotation, deciding upon a method of rotation was required. Under the orthogonal rotation approach, there are quartimax, varimax, and equmiax methods of rotation. Based on the claims that varimax is the method that gives a clearer separation of factors, and that it has proved very successful as an analytic approach (Hair et al. 1998), this study applied this method for analysing factor analysis.

Benchmark for rotated component matrix: Select the loading 0.3 or greater. If possible choose the pure indicators. Pure indicators have loadings of 0.3 or greater on *predominant* factor (component 1). If not, a complex indicator, where it has several high loadings on more than one factor, will be used for subsequent analyses.

6.3.1.2 Reliability Analysis

The results of exploratory factor analysis were to be used as inputs for conducting reliability analysis. Within this analysis, item-to-total correlations, inter-item correlation, and Cronbach's alpha were applied to assess the degree of consistency

between multiple measurements of indicators (Coakes and Steed 1999; Hair et al. 1998). The following benchmarks were applied (Hair et al. 1998):

1. Item-to-total correlations: 0.5
2. Inter-item correlation: 0.3
3. Cronbach's alpha: 0.6

As the objective was to reduce the number of indicators from the original indicators to 4 indicators per construct, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was deleted. The decision of a maximum of 4 indicators for each individual construct was set up to allow the subsequent structural equation modelling analysis to be run without the particular problem of sample size (Holmes-Smith 2001).

6.3.1.3 Construct Validity Analysis

Up to the reliability process above, the study was able to confirm the conceptual definition of the constructs utilised in this research, and fulfilled the requirement of internal consistency. The following test seeks to ensure that a scale or set of measures accurately represents the concept of interest. For this validity purpose, the Spearman correlation coefficient was utilised. Spearman correlation coefficient is a non-parametric version of the Pearson correlation coefficient based on the ranks of the data rather than the actual values. It is appropriate for ordinal data, or for interval data that do not satisfy the non-normality assumption (SPSS 2004). To satisfy the requirement of validity the coefficient needs to be significant at the 0.01 level (2-tailed).

6.3.2 Results

6.3.2.1 Autonomy Construct (Auto)

The Autonomy construct originally consisted of 6 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number variables of this construct were reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were six pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, appropriateness of factor analysis was deduced.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 40.573% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 2.434, explained 40.573% of the variance.

Component Matrix

As four (4) pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two or more factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were 3 pure indicators with loadings above 0.3 in factor one, none complex indicators with loadings of more than 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

All but one of the inter-item correlations were above the threshold of 0.3; two out of four item-to-total correlations had values higher than the benchmark of 0.5; and Cronbach's alpha was above 0.60. The results of the reliability analysis were satisfactory.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators Auto3, Auto4, Auto5, and Auto6 summarised the most essential information contained in the construct Autonomy, which originally consisted of 6 indicators. Auto3 indicates that there is freedom for employees to implement decisions according to their own views; Auto4 indicates that employees influence important decisions concerning work; Auto5 indicates that there is freedom for employees to plan their own work; and Auto6 indicates that there is an opportunity for employees to bring forward ideas before decisions are made. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct organisational culture, and; second, these indicators come from a single factor solution with the eigenvalue of 2.434 that portrays autonomy construct, then it is considered appropriate to leave the construct with its original name (autonomy).

6.3.2.2 External Orientation Construct (EO)

The External Orientation construct initially comprised 6 variables (Appendix 2). Following the factor, reliability and construct validity analyses, the variables of this construct were reduced to a smaller set of 4 variables that summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were fifteen pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analyses.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability is deduced.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and explained 60.867% of variance.

Scree Plotting

Factor 1, with an Eigenvalue 3.652, explained 60.867% of the variance.

Component Matrix

As four (4) pure indicators with loadings greater than 0.3 were found in factor one and two (2) complex indicators with loadings more than 0.3 in two factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there was 1 pure indicator with a loading above 0.3 in factor one, 1 pure indicator with a loading above 0.3 in factor two, 1 pure indicator with a loading above 0.3 in factor three, 3 complex indicators with loadings of more than 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, a process of deleting indicators was applied based on the highest possible Cronbach's alpha if the items was to be deleted.

Inter-item correlations were all above the threshold of 0.3; four item-to-total correlations had values higher than the benchmark of 0.5; and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators EO2, EO3, EO4, and EO5 summarised the most essential information contained in the External Orientation construct, which originally consisted of 6 indicators. EO2 indicates that there is an investigation of the wishes and needs of customers; EO3 indicates that there is active canvassing of new customers; EO4 indicates that company is working to improve the local market position; and EO5 indicates that there is a thorough training of employees in systematically gathering information on what customers want to see improved. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of organisational culture, and; second, these indicators come from a single factor solution with the eigenvalue of 3.652 that portrays external orientation construct, then it is considered appropriate to leave the construct with its original name (external orientation).

6.3.2.3 Inter-departmental Coordination Construct (IDC)

The Inter-departmental Coordination construct initially had 7 variables (Appendix 2). Following the factor, reliability and construct validity analyses, the number of variables of this construct were reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were fifteen pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability is inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 56.979% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 3.989, explained 56.979% of the variance.

Component Matrix

As four (4) pure indicators with loadings more than 0.3 were found in one factor, and two (2) complex indicators with loadings more than 0.3 in two factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were 2 pure indicators with loadings above 0.3 in one factor, 3 complex indicators with loadings of more than 0.3 in two factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators IDC1, IDC2, IDC3, and IDC4 summarised the most essential information contained in the Inter-departmental Coordination construct, which originally consisted of 7 indicators. IDC1 indicates that there is useful cooperation between departments; IDC2 indicates that there is exchange of useful information between departments; IDC3 indicates that departments support one another in the resolution of problems; and IDC4 indicates that there is mutual communication between heads of departments. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of organisational culture, and; second, these indicators come from a single factor solution with the eigenvalue of 3.989 that portrays inter-departmental coordination construct, then it is considered appropriate to leave the construct with its original name (inter-departmental coordination).

6.3.2.4 Human Resource Management Construct (HRM)

The Human Resource Management construct initially had 7 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were fifteen pairs with a correlation above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, factor analysis was deemed appropriate.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0, and this explained 51.866% of variance.

Scree Plotting

Factor 1, with an Eigenvalue 3.631, explained 51.866% of the variance.

Component Matrix

As six (6) pure indicators with loadings of more than 0.3 in one factor were found, and 1 complex indicator with a loading of more than 0.3 in two factor was revealed, rotation was necessary.

Rotated Component Matrix

Results showed that there were 5 pure indicators with loadings above 0.3 in one factor, and 1 complex indicator with a loading of more than 0.3 in two factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators HRM1, HRM2, HRM5, and HRM6 summarised the most essential information contained in the Human Resource Management construct, which originally consisted of 7 indicators. HRM1 indicates that performance appraisals are taken seriously; HRM2 indicates that employees obtain useful information about their functioning; HRM5 indicates that employees are told when a good job is done; and HRM6 indicates that managers help good people to advance. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of organisational culture, and; second, these indicators come from a single factor solution with the eigenvalue of 3.631 that portrays human resource management construct, then it is considered appropriate to leave the construct with its original name (human resource management).

6.3.2.5 Improvement Orientation Construct (IO)

The Improvement Orientation construct initially comprised 7 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were twenty-one pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Thus, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 61.120% of variance.

Scree Plotting

Factor 1, with an Eigenvalue 4.278, explained 61.120% of the variance.

Component Matrix

As five pure indicators with loadings of more than 0.3 were found in one factor and two (2) complex indicators with loadings of more than 0.3 emerged in two or more factor, rotation was necessary.

Rotated Component Matrix

Results showed that there were 5 complex indicators with loading above 0.3 in two factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3; four item-to-total correlations had values higher than the benchmark of 0.5; and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators IO3, IO4, IO5, and IO6 summarised the most essential information contained in the construct Improvement Orientation, which originally consisted of 7 indicators. IO3 indicates that there are initiatives taken by employees to improve the way in which the work is done; IO4 indicates that new and improved ways to do work are continually adopted; IO5 indicates that employees try to be pioneers; and IO6 indicates that people put in maximal effort. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are a sub-construct of bigger construct of organisational culture, and; second, these indicators come from a single factor solution with the eigenvalue of 4.278 that portrays improvement orientation construct, then it is considered appropriate to leave the construct with its original name (improvement orientation).

6.3.2.6 Board of Commissioners Construct (BOC)

The Board of Commissioners construct initially had 11 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were fifty-six pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 61.248% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 6.737, explained 61.248% of the variance.

Component Matrix

As there were seven pure indicators with loadings of more than 0.3 in one factor and four (4) complex indicators with loadings of more than 0.3 in two factors, rotation was necessary.

Rotated Component Matrix

Results showed that there were 2 pure indicators with loadings of above 0.3 in one factor, 7 complex indicators with loadings of more than 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators BOC3, BOC4, BOC8, and BOC9 summarised the most essential information contained in the construct Board of Commissioners, which originally consisted of 11 indicators. BOC3 indicates that BOC ensures that BOD complies with Articles of Association; BOC4 indicates that BOC ensures that BOD complies with regulations having the force of law; BOC8 indicates that BOC ensures that BOD protects the interests of shareholders; and BOC9 indicates that BOC ensures that BOD protects the interests of stakeholders. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are a sub-construct of bigger construct of internal corporate governance, and; second, these indicators come from a single factor solution with the eigenvalue of 6.737 that portrays board of commissioners construct, then it is considered appropriate to leave the construct with its original name (board of commissioners).

6.3.2.7 Independent Commissioners Construct (IC)

The Independent Commissioners construct initially had 11 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were fifty-five pairs with a correlation above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. As a result, the appropriateness of the factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 74.289% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 8.172, explained 74.289% of the variance.

Component Matrix

As nine pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were 11 complex indicators with loadings of above 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators IC4, IC5, IC6 and IC7 summarised the most essential information contained in the construct Independent Commissioners, which originally consisted of 11 indicators. IC4 indicates that IC ensures that company establishes control system; IC5 indicates that IC ensures that company establishes audit system; IC6 indicates that IC ensures that company complies with regulations; and IC7 indicates that IC ensures that company manages risk. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are a sub-construct of bigger construct of internal corporate governance, and; second, these indicators come from a single factor solution with the eigenvalue of 8.172 that portrays independent commissioners construct, then it is considered appropriate to leave the construct with its original name (independent commissioners).

6.3.2.8 Audit Committee Construct (AC)

The Audit Committee construct originally consisted of 13 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were seventy-eight pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Consequently, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 66.809% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue 8.685, explained 66.809% of the variance.

Component Matrix

As nine pure indicators with loadings of more than 0.3 in one factor were found and four (4) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were as 1 pure indicator with a loading of more than 0.3 in one factor, and 12 complex indicators with loadings above 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators AC6, AC7, AC8, and AC9 summarised the most essential information contained in the construct Audit Committee, which originally consisted of 13 indicators. AC6 indicates that AC creates disciplines and control which lessen the possibility the company being jeopardised; AC7 indicates that AC empowers internal audit; AC8 indicates that AC promotes adequate structures of internal control; and AC9 indicates that AC improves the quality of financial disclosure and reporting. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of internal corporate governance, and; second, these indicators come from a single factor solution with the eigenvalue of 8.685 that portrays audit committee construct, then it is considered appropriate to leave the construct with its original name (audit committee).

6.3.2.9 Board of Directors Construct (BOD)

The Board of Directors construct originally consisted of 17 variables (Appendix 2). Following the factor, reliability and construct validity analyses the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were one-hundred-and-thirty-six pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was signifacant. Consequently, factorability is inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

Two factors had an Eigenvalues above 1.0 and these explained 66.807% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 10.325, explained 60.734% of the variance. Factor 2, with an Eigenvalues of 1.032 explained 6.073% of the variance

Component Matrix

As twelve pure indicators with loadings of more than 0.3 in one factor were found and five (5) complex indicators with loadings of more than 0.3 in two or more factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were three pure indicators with loadings of more than 0.3 in one factor, and 13 complex indicators with loadings above 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators BOD7, BOD8, BOD9, and BOD17 summarised the most essential information contained in the Board of Directors construct, which originally consisted of 17 indicators. BOD7 indicates that BOD creates an ethical environment; BOD8 indicates that BOD creates a proper human resource management function; BOD9 indicates that BOD enforces codes of conduct; and BOD17 indicates that BOD ensures transparency in the financial framework of the company. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of internal corporate governance, and; second, these indicators mostly come from a single factor solution with the eigenvalue of 10.325 that portrays board of directors construct, then it is considered appropriate to leave the construct with its original name (board of directors).

6.3.2.10 Internal Control Group Construct (ICG)

The Internal Control Group construct originally consisted of 5 variables (Appendix 2). Following the factor, reliability and construct validity analyses, the number of variable of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were ten pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 72.000% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 3.600, explained 72.000% of the variance.

Component Matrix

As two pure indicators with loadings of more than 0.3 in one factor were found and three (3) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were 1 pure indicator with a loading above 0.3 in one factor and 4 complex indicators with loadings of more than 0.3 in two factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators ICG1, ICG2, ICG3, and ICG4 summarised the most essential information contained in the Internal Control Group construct, which originally consisted of 5 indicators. ICG1 indicates that ICG creates policies to secure the assets of the company; ICG2 indicates that ICG creates policies to increase the operational efficiency and effectiveness of the company; ICG3 indicates that ICG develops the reliability and the comprehensiveness of accounting/financial information; and ICG4 indicates that ICG ensures compliance with applicable policies and regulatory requirements. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of internal corporate governance, and; second, these indicators come from a single factor solution with the eigenvalue of 3.600 that portrays internal control groups construct, then it is considered appropriate to leave the construct with its original name (internal control groups).

6.3.2.11 Codes of Conduct Construct (COC)

The Code of Conducts construct initially consisted of 7 variables (Appendix 2). Following the factor, reliability and construct analyses, the number of variables of this construct was reduced to 4, which summarised the most essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were twenty-one pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Consequently, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 73.543% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 5.148, explained 73.543% of the variance.

Component Matrix

As five (5) pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Rotated Component Matrix

Results showed that there were 7 complex indicators with loadings above 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators COC4, COC5, COC6, and COC7 summarised the most essential information contained in the Code of Conducts construct, which originally consisted of 7 indicators. COC4 indicates that company has codes of conduct which make certain that no one engages in activities that jeopardise the company's reputation; COC5 indicates that company has codes of conduct which treat all stakeholders fairly and honestly; COC6 indicates that company has codes of conduct which develop mechanisms where violations of company policy can be reported without fear of retribution; and COC7 indicates that company has codes of conduct which create an environment in which the decisions of company's organs are obeyed. It is acknowledged that labelling or naming these indicators can be made. However, considering that, first, they are sub-construct of a bigger construct of internal corporate governance, and; second, these indicators come from a single factor solution with the eigenvalue of 5.148 that portrays codes of conduct construct, then it is considered appropriate to leave the construct with its original name (codes of conduct).

6.3.2.12 Organisational Performance Construct (OP)

The Organisational Performance construct initially consisted of 8 variables (Appendix 2). Following the factor, reliability and construct validity analyses, the number of variables of this construct was reduced to 4, which summarised the most

essential information. A complete output of factor analysis was shown in Appendix 4, and the summary of the factor analysis was described below.

Correlation Matrix

There were twenty-eight pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Total Variance Explained

One factor had an Eigenvalue above 1.0, and this explained 68.457% of the variance.

Scree Plotting

Factor 1, with an Eigenvalue of 5.477 explained 68.457% of the variance.

Component Matrix

As six (6) pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two or more factors emerged, rotation was necessary.

Rotated Component Matrix

- Results showed that there were 2 pure indicators with loadings above 0.3 in one factor, and 6 complex indicators with loadings more than 0.3 in two or more factors.

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

In conclusion, the indicators OP2, OP4, OP5, and OP6 summarised the most essential information contained in the Organisational Performance construct, which originally consisted of 8 indicators. OP2 indicates to what degree the organisation needs to improve in customer satisfaction criteria; OP4 indicates to what degree the organisation needs to improve in professional behaviour criteria; OP5 indicates to what degree the organisation needs to improve in service quality criteria; and OP6 indicates to what degree the organisation needs to improve in contact with clients criteria. It is acknowledged that labelling or naming these indicators can be made. However, considering that these indicators come from a single factor solution with the eigenvalue of 5.477 that portrays organisational performance construct, it is considered appropriate to leave the construct with its original name (organisational performance).

6.3.3 Factor Analysis Summary

Throughout the chapter, factor analysis was applied to the 12 constructs of this study of organisational culture, internal corporate governance, and organisational performance. Utilising pre-determined requirements based on the guidelines of Coakes and Steed (1999) and Hair et al. (1998), the study observed the following results:

a. Factor 1 represents the Autonomy construct, and its indicators are Auto3, Auto4, Auto5, and Auto6.
b. Factor 2 represents the External Orientation construct, and its indicators are EO2, EO3, EO4, and EO5.
c. Factor 3 represents the Inter-departmental Coordination construct, and its indicators are IDC1, IDC2, IDC3, and IDC4.
d. Factor 4 represents the Human Resource Management construct, and its indicators are HRM1, HRM2, HRM5, and HRM6.
e. Factor 5 represents the Improvement Orientation construct, and its indicators are IO3, IO4, IO5, and IO6.
f. Factor 6 represents the Board of Commissioners construct, and its indicators are BOC3, BOC4, BOC8, and BOC9.
g. Factor 7 represents the Independent Commissioners construct, and its remaining indicators are IC4, IC5, IC6, and IC7.
h. Factor 8 represents the Audit Committee construct, and its indicators are AC6, AC7, AC8, and AC9,
i. Factor 9 represents the Board of Directors construct, and its indicators are BOD7, BOD8, BOD9, and BOD17.
j. Factor 10 represents the Internal Control Group construct, and its indicators are ICG1, ICG2, ICG3, and ICG4.
k. Factor 11 represents the Code of Conducts construct, and its indicators are COC4, COC5, COC6, and COC7.
l. Factor 12 represents the Organisational Performance construct, and its indicators are OP2, OP4, OP5, and OP6.

6.4 Chapter Summary

The questionnaire surveys were sent to 1000 managers or executives of Indonesian companies, which were selected based on purposive sampling method. To endorse the response, a summary of result was offered to those who responded. This resulted 66.9 per cent of response rate, but only 496 of 1000 were useable for data analysis purposes.

The demographic data showed the interesting information. Among other things, it was shown that more than 79 per cent of respondents were experienced managers or executives who had been in the current company for more than 5 years.

With such figures, it is believed that their understanding about the company is deemed appropriate.

The aim of the factor analysis to reduce the number of variables to four (4) indicators for every construct was achieved, limiting the final data ready for subsequent Structural Equation Modelling (SEM) to 48 variables (4 variables x 12 constructs). As highlighted in section 6.3, this process was considered very important as the SEM technique requires a minimum sample size of 200 to be classified as appropriate (see section 7.2.2 for detailed discussion on the sample size required for SEM technique). All 12 constructs were confirmed as robust, satisfying the statistical thresholds outlined, including those for reliability and validity.

Chapter 7: Analysis of Results (Stage 2) – Structural Equation Modelling (SEM) Analysis*†

7.1 Introduction

In this chapter, the results of the questionnaire survey and factor analysis are analysed using Structural Equation Modelling. In particular, LISREL 8.8 software is utilised to run the analysis. LISREL is an acronym of LInear Structural RELationship. Originally, the LISREL methodology was developed by Karl G. Jöreskog in 1973 (Holmes-Smith 2001). Later, Karl G. Jöreskog and Dag Sörbom published numerous journal articles and books on the LISREL model and its

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* Part of this chapter has been presented at the following conferences:

Wibowo, A (2005), "The Impact of Organisational Culture and Internal Corporate Governance on Performance: A Conceptual Framework", in *International Seminar towards a New Indonesia*, (CD ROM), Faculty of Economics - Gadjah Mada University, Yogyakarta, 16-17 September.

Wibowo, A., Evans, R., and Quaddus, M (2007), "Does Organisational Culture Affect Organisational Performance? A Study of Indonesian Companies", in *Proceeding of the 7th Asian Academy of Management Conference,* eds. Nasurdin, A., Ibrahim, D.S., Osman, I., Haron, M.S., Hoo, Q.C., Ali, R., Ramayah, T., Zainuddin, Y. and Ahmad, Z.A., Asian Academy of Management and School of Management - Universiti Sains Malaysia, Malaysia, 21-25 May, pp. 242-251.

Wibowo, A., Evans, R., and Quaddus, M (2007), "The Impact of Internal Corporate Governance on Organisational Performance in Indonesian Companies", in *Proceeding of the 10th International Conference of the Society for Global Business and Economic Development,* eds. C. Jayachandran, K. Okachi, C. Chakraborty, R. Misra and R. Lord - Montclair State University and Ryukoku University, Kyoto, 8-11 August, pp. 3064-3084.

Wibowo, A (2007), "Application of Confirmatory Factor Analysis to the Study of Internal Corporate Governance Construct: A Higher-Order Factor Model", in *Curtin Business School Doctoral Students' Colloquium 2007* – Curtin University of Technology, Perth, 30-31 August.

Evans R., Quaddus, M., and Wibowo, A (2007), "Does Organisational Culture Affect Internal Corporate Governance? A Study of Indonesian Companies", in *Proceeding of the 21st ANZAM 2007 Conference,* (CD ROM), ed. Ross Chapman - University of Western Sydney, Sydney, 4-7 December.

† Part of this chapter has been accepted and will be presented in the following conference:

Wibowo, A., Quaddus, M., and Evans, R (2008), "Partial and Total Disaggregation Framework of a Second-order Construct in the Relationship of Organisational Culture and Internal Corporate Governance", in *7th European Conference on Research Methodology (ECRM) for Business and Management Studies*, Conference Chair Peter Sharp - Regent's College, London, UK, 19-20 June 2008.

software package. The widespread use of LISREL in today's research and publications may be the result of its being the first program developed for structural equation modelling. Since the first LISREL program (version 3) launched in 1975 (du Toit and du Toit 2001), several updates had been made to expand its functionality, capability, and interactively. The software used in this analysis is LISREL 8.8, which was released on 25 July 2006 (*SSI Scientific Software International* 2006).

Structural Equation Modelling, which is also known as Latent Variable Structural Equation, Causal Modelling, and Analysis of Covariance Structure, is 'an analytical tool that improves upon, and supersedes, other tools such as multiple and multivariate regression, recursive path analysis and non-recursive econometric modelling, ANOVA, analysis of covariance, factor analysis, principal component analysis, and classical test theory' (Holmes-Smith 2001 p. 1). As a 'second-generation of multivariate analysis' (Fornell 1987, p. 408), Structural Equation Modelling has several advantages compared to first generation statistical tools such as regression, path analysis, and factor analysis. Structural Equation Modelling enables researchers to do the following (Byrne 2006; Holmes-Smith 2001; *SSI Scientific Software International* 2006):

a. Explore the relationships amongst the dependent variables;
b. Incorporate and estimate the relationships not only amongst observed variables but also latent constructs which are reflected with or formatted by several observed variables/indicators;
c. Permit the measurement error of indicators to be unequal and correlate;
d. Allow unequal weights for indicators of any latent constructs.
e. Measure recursive and non-recursive relationship between constructs; and
f. Allow for estimation of higher-order latent construct where no observed indicators of the higher-order are available.

There are several statistical packages for performing Structural Equation Modelling, such as Arbuckle's (SPSS) AMOS, Hartmann's (SAS) Proc Calis, Multivariate Software's EQS, Browne and Mel's (Systat) RAMONA, Lohmoller's PLS-PC, and Scientific Software International's LISREL, among many others (Rigdon 2006; Holmes-Smith 2001). Currently, AMOS, EQS, and LISREL are the most popular software; however, LISREL is still the software of reference in most

journal articles about Structural Equation Modelling (Garson 2006). Recent LISREL software also distinguishes itself from any other softwares in its ability to specify the model in one of four ways (Holmes-Smith 2001):

a. Original LISREL syntax (text) input in Greek letters,
b. SIMPLIS syntax (text) input,
c. Graphics (path diagram) input, or
d. Interactive, windows-based input.

In addition, 'the LISREL program is the most longstanding and widely distributed' (Byrne 1998 p. 9). Based on the advantages of this software, LISREL 8.8 – as the most recent version – was used as the data analysis tool in this study.

7.2 Selection of Estimation Method

Concerning the method of estimation, LISREL offers several methods such as Instrumental Variables (IV), Two-Stage Least Squares (TSLS), Unweighted Least Squares (ULS), Generalised Least Squares (GLS), Maximum Likelihood (ML), Generally Weighted Least Squares (WLS), and Diagonally Weighted Least Squares (DWLS) (Jöreskog and Sörbom 1996). The choice of one among the available methods is based on the type of data, the multivariate distribution of the data, and the sample size. As such, the properties or the characteristics of the data used in this study are discussed first, before moving to the primary analysis of LISREL.

7.2.1 Data Examination

The raw data indicated some missing values which were substituted with series means (see discussion in chapter 4 section 4.6.1). The observed variables were measured using 6-point Likert scales. These types of scales have been subject to academic debate in several studies. Jöreskog (2005) claimed that the Likert scale is an ordinal variable in essence of its not having origins or units of measurement, its distribution being discrete, and its not having values between the numbers. Hence, to use structural equation modelling with ordinal variables requires other techniques than those traditionally employed with continuous variables – Maximum Likelihood (ML). In practice, however, Byrne (2006) reports that during the past 15 years, the application of structural equation modelling has mostly relied on the Likert scale, in which Maximum Likelihood (ML) is used to estimate the parameters. Reporting the

reviews of the Monte Carlo studies that addressed this issue, West, Finch and Curran (1995) summarised the following conclusions:

a. Variables with fewer than 5 categories are likely to generate low Pearson correlations.
b. If the categorical variables above follow a normal distribution, the chi-square likelihood ratio test of model fit is affected very little, and factor loadings and factor correlations are modestly underestimated.
c. Loadings and correlation become underestimated if variables have less than 3 categories.
d. In addition, error variance estimate is likely to be most sensitive to categorical variables and standard error estimates tend to be too low.

Further, Byrne (2006) posited that the failure to address the ordinality of the data is likely to be negligible in the case that the number of categories is large (more than 5) and the data approximates a normal distribution. In a similar vein, Bentler and Chou (1987) strongly argued that given normally distributed categorical variables, a continuous method can be used with confidence if the variables have four or more categories. Thus, in practices, researchers were treating variables with Likert scales as continuous variables, and using Maximum Likelihood (ML) as the method of estimation.

Moving to multivariate distribution characteristics, it is observed that Kolmogorov Smirnov's normality test of the data showed distribution anomalies in all indicators. Skewness and kurtosis values, although fell within the acceptable range (±2), they had non-zero univariate skewness and kurtosis. Therefore, it is certain that multivariate normal distribution can not be assumed. Byrne (2006) suggests that although aberrant indicators are not extremely kurtotic, they may be adequately non-normal in which goodness-of-fit indices such as the usual chi-squares (χ^2), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) become problematic. As a result, the Satorra-Bentler scaled statistic is used to make adjustments to standard errors and chi-squares for non-normal multivariate data. The Satorra-Bentler test statistics, such as S-B χ^2, RMSEA, Root Mean Square Residual (RMR), and other fit indices are available in LISREL 8.8 by setting the estimation method to Robust Maximum Likelihood (RML).

7.2.2 Sample Size

As the analysis was ultimately to rely on Structural Equation Modelling (SEM), sample size was an important issue. It is commonly agreed that sample size will influence the result of structural equation analysis. Even though exact guidelines of minimum sample size are absent, researchers have highlighted this issue.

Anderson and Gerbing (1988) suggested that a sample size of 150 or more is needed to perform SEM. Hair et al. (1998 p. 605) stated more convincingly that 'Maximum likelihood estimation (MLE), the most common estimation procedure, had been found to provide valid results with sample size as small as 50, but a sample this small is not recommended'. However, in case of the existence of misspecification, a complex or large model, non-normal characteristics of data, and the use of a method of estimation other than the MLE procedure, Hair et al. (1998) recommended a minimum sample size of 200. Using different approaches (Monte Carlo and Analytic work), Tanaka (1987) suggested the ratio of sample size to the number of parameters being estimated be considered. Following this argument, Bentler (1995) specifically recommended that the ratio of the number of cases to estimated variables should be between 5:1 to 10:1. Still using the Monte Carlo approach, researchers examined the stability of parameter estimates in relation to the sample size (Boomsma 1983; Guadagnoli and Velicer 1988; Gerbing and Anderson 1985). While Boomsa and Gerbing and Anderson agreed that a sample less than 100 would provide instability of parameter estimates, Gerbing and Anderson argued that sample does not need to surpass 200 – the number that Boomsa recommended to have a fairly robust estimate. In a similar vein, Guadagnoli and Velicer recommended that applied research proceed with as small a sample as 150 if the loading of variables is high. For instance, if constructs have four or more variables with loadings above .60 then researchers can have a high degree of confidence in interpreting the results.

By contrast, Holmes-Smith (2001 p. 197) denied the ratio of subjects per variable above, stating '…statistical theory underlying parameter estimation is asymptotic in nature. This means that statistics such as the standard error for parameter estimates can only be given confidently as the total number of cases approaches infinity'. To obtain meaningful results, a large sample is needed. In this regard, Holmes-Smith states that 'when the number of variables (k) is 12 or greater, the sample size must be at least 1.5k(k+1)' (2001 p. 198). For a study such as this,

with 48 variables, a sample size of 3528 is required. However, Hair et al. (1998 p. 605) caution that 'as the sample size becomes large (exceeding 400 to 500), the method becomes "too sensitive" and almost any difference is detected, making all goodness-of-fit measures indicate poor fit'. Tanaka (1987) and Hu and Bentler (1995), indeed, stressed that the statistical power of having a large sample would be high, meaning that even models with only trivial misspecifications would be likely to be rejected.

Although less important, additional factors that impacted sample size were considered during the fieldwork stage of this study. In this regard, given data distribution and collection in 4 cities in Java (Jakarta, Surabaya, Bandung, and Yogyakarta), and associated printing, postage and handling, as well as time constrains and costs during the fieldwork for this study, 496 completed valid questionnaires were deemed sufficient to be analysed in final stage.

7.2.3 Estimation Method

LISREL provides several methods of estimation for structural equation modelling, namely Instrumental Variables (IV), Two-Stage Least Squares (TSLS), Unweighted Least Squares (ULS), Generalised Least Squares (GLS), Maximum Likelihood (ML), Generally Weighted Least Squares (WLS), and Diagonally Weighted Least Squares (DWLS) (Jöreskog and Sörbom 1996). Among the above estimation methods, GLS and ML were considered the most common fitting criteria, along with Ordinary Least Squares (OLS) (Kelloway 1998). In processing the data, the iterative procedure for parameter estimation begins by taking a guess at the parameter values. Based on these values, it then calculates the implied covariance matrix (S), which is compared with the observed (actual) covariance matrix (C) at a later stage. If the discrepancy between S and C becomes too small then iteration stops, otherwise it will start with new values and go through the process until the discrepancy function is deemed to have been minimised (Kelloway 1998; Holmes-Smith 2001). The key difference among these above methods of estimation is in the way they minimise the discrepancy between implied covariance matrix (S) and observed (actual) covariance matrix (C) (Holmes-Smith 2001).

ML and GLS are methods of estimation for standard and multilevel structural equation modelling that assume the data to follow a multivariate normal distribution. In practice, however, the assumption of a multivariate data distribution often does

not hold (Jöreskog and Sörbom 2006), in particular in behavioural research (Bentler 1996), as was the case of this research. As an alternative, LISREL 8.8 recommends other methods such as WLS, DWLS, and Robust Maximum Likelihood (RML) to fit the structural equation models with the data sets. These methods of estimation are available in LISREL 8.8.

Comparing the three of estimation methods – WLS, DWLS, and RML – there are important issues to be considered. Relating to the use of WLS, Gefen, Straub and Boudreau (2000) stated that this method requires polychoric correlations or there are substantial deviations from a multivariate-normal distribution. Describing and distinguishing this method from others, Jöreskog and Sörbom (1996) acknowledged that although theoretically attractive, the use of WLS presents several difficulties in practical applications, such as the demand for huge computer memory, very large sample size, and difficulties in dealing with missing observations in the data. As a result, this WLS estimation method was rarely used (Holmes-Smith 2001).

As an alternative to WLS, Jöreskog and Sörbom (1996) recommended the use of DWLS. Instead of calculating asymptotic covariance matrices of estimated coefficients, this method only computes the asymptotic variances of the estimated coefficients. However, using the DWLS method is recommended if data are ordinal, categorical or mixed (Jöreskog and Sörbom 2006).

In regard to Robust Maximum Likelihood (RML), LISREL 8.8 clearly recommends that:

> If the data are continuous and approximately do not follow a multivariate Normal distribution and the sample size is not large, then the Robust Maximum Likelihood Method is recommended. This method will require an estimate of the asymptotic covariance matrix of the sample variances and covariances (Jöreskog and Sörbom 2006 p. 7).

Supporting this recommendation, researchers have highlighted valuable features of this method, such as its ability to produce robust chi-square statistic and robust standard errors under the condition of non-normality in large samples (Byrne 2006), and also in small samples (Bentler 1995).

In summary, as the data characteristics showed non-normality in distribution, were continuously scaled, and, relatively speaking not a very large sample, then the method of estimation applied to the current analysis was Robust Maximum Likelihood, which is available in LISREL 8.8 SEM software.

7.3 Model Assessment

SEM researchers are urged to test the measurement model underlying full structural equation modelling before proceeding to test the structural model (Anderson and Gerbing 1988; Jöreskog and Sörbom 2006; Holmes-Smith 2001). This approach is known as two-step modelling. In the measurement part, the relationship of observed variables and their underlying construct is measured, while in the structural part, the casual relationship between constructs is examined. The detailed advantages of two-step modelling were discussed by Anderson and Gerbing (1988)[23].

In pursuing the fit of a measurement model, Holmes-Smith (2001 p. 201) recommended the one-factor congeneric model as 'the simplest form of a measurement model and it represents the regression of a set of observed variables on a single latent variable'. Model modification or re-specification is then performed to improve the model fit as well as to derive parameters that have real significance and substantive meaning (Sethi and King 1994). In this regard, one can delete non-significant estimated parameters and/or set free the parameters that share large error variance. As recommended by Jöreskog and Sörbom (1989; 1996), Sethi and King (1994), and LISREL 8.8 (2006), only one parameter was changed at every step. The model modifications or re-specifications are continued until all parameter estimates and overall fit measures are judged to be statistically and substantially satisfactory (Sethi and King 1994). Following this step, reliability and validity tests of measurement properties are carried out before proceeding to subsequent structural model analysis.

The structural part permits the relationships between constructs to be examined. It is also possible and often desirable to include observed variables as part of the structural model. To improve the structural relation between constructs or latent variables, modification or re-specifications are again carried out. These processes will be stopped when there is no more statistical evidence and theoretical justification that suggests further refining of the structural model is required. That is, statistical model fit has been achieved (Jöreskog and Sörbom 2006).

[23] A summary of these advantages of two-step modelling is as follow: (1) it allows tests of the significance for all pattern coefficient; (2) it allows an assessment of whether any structural model would give an acceptable fit; (3) one can make an asymptotically independent test of the substantive or theoretical model of interest; (4) respecification can be made to achieve acceptable unidimensional construct measurement; (5) it provides a particularly useful framework for formal comparisons of the substantive model of interest with nest most likely theoretical alternatives.

7.3.1 Assessment of Measurement properties

7.3.1.1 Assessment of Unidimensionality (and Convergent Validity) of Each Latent Variable

The objective of assessing unidimensionality is to ensure that a set of items (indicators) measure the underlying latent trait or construct (Sethi and King 1994; Venkatraman 1989). In pursuing this objective, model re-specifications in the iterative process were undertaken to improve the fit of the model and to derive parameters that have real significance and substantive meaning (Sethi and King 1994). These can be achieved by deleting non-significant estimated parameter and freeing the parameters that share large error variance (Holmes-Smith 2001). In assessing the fit of the model, a number of diverse perspectives and several different criteria are available (Byrne 2006; Kelloway 1998). The approach taken to assess the model fit in this study was based on the suggestions of a number or researchers (Byrne 1998; Schumacker and Lomax 1996; Holmes-Smith 2001; Jöreskog and Sörbom 1996; Sethi and King 1994). Firstly, parameters estimates were examined to identify the viability of their estimated values, and goodness-of-fit indices were examined to discover the extent to which the hypothesised model adequately described the sample data. Secondly, sources of misfit were detected. In this regard, LISREL produces two types of outputs bearing on model misspecification — the residuals, and the modification indices.

7.3.1.1.1 Examination of Parameter Estimates

To determine the viability of its values, parameter estimates should exhibit the correct sign and size, and be consistent with underlying theory (Byrne 1998; Jöreskog and Sörbom 2006). To assess these requirements, Byrne (1998) states that (1) parameters should not fall outside the admissible range, as this indicates either the model is wrong or the input matrix lacks sufficient information. Examples are correlations > 1, negative variances, and covariance or correlation matrices which are not positive definite. (2) Standard error of parameters should not be excessively large or small. Extremely small standard error causes test statistic for its related parameter cannot be defined (Bentler 1995); likewise, extremely large standard error indicates that parameters cannot be determined (Jöreskog and Sörbom 1989). However, no definitive value of 'small' and 'large' has been established. (3) The *t*-value of individual parameters should not be less than ±1.96 (at 5% significance level) (Byrne 1998; Holmes-Smith 2001). Non-significant parameters are considered unimportant,

and therefore should be deleted from the model (Jöreskog and Sörbom 1996; Byrne 1998; Schumacker and Lomax 1996; Holmes-Smith 2001).

7.3.1.1.2 Squared Multiple Correlations (R^2)

These measures show how well the observed variables serve as measurement instruments for the latent variables (Jöreskog and Sörbom 1996). Jöreskog (1993), explains that a small squared multiple correlation value indicates a weak relationship and reflects that the model is not good. The squared multiple correlations can be calculated by squaring the standardised loading. To pass this model-based estimate the squared multiple correlations should exceed .50, which is roughly equivalent to a standardised loading of.70 (Holmes-Smith 2001).

7.3.1.1.3 Evaluation of Overall Model Fit

Unlike other multivariate dependence techniques – multiple regression, discriminant analysis, multivariate analysis of variance, or even conjoint analysis – there is no single statistical test to assess the overall goodness-of-fit in SEM (Hair et al. 1998). Instead, researchers have been using a combination of a number of goodness-of-fit measures to assess the model. In essence, the goal is to find a model that not only statistically fits with the data, but also to have parameters whose properties are substantively meaningful (Jöreskog and Sörbom 1993). In doing so, LISREL's iteration calculates the implied covariance matrix (S) and then compares it with the observed (actual) covariance matrix (C). If the discrepancy between S and C becomes so small then iteration stops, otherwise it will start with new values and go through the process until the discrepancy function is deemed to have been minimised (Kelloway 1998; Holmes-Smith 2001; Byrne 1998).The null hypothesis is then that there is no difference between the implied and the observed covariance matrix. Based on a 5% significance level, one can conclude that if the probability of the test is less than 5%, the hypothesised model has significant discrepancy with the sample data, otherwise there is no statistical evidence to reject the null hypothesis (Byrne 1998; Holmes-Smith 2001).

There are a number of goodness-of-fit indices to choose from. LISREL itself provides more than 15 indices. LISREL 8.8 also provides the results of tests under conditions of non-normality in the data – as was the case in this study – by invoking the Robust Maximum Likelihood RML) method of estimation. In this study, the overall model fit was based on the following indices, namely Satora-Bentler Chi-Square (S-B χ^2), Root Mean Square Residual (RMR), Root Mean Square Error of

Approximation (RMSEA), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), and Comparative Fit Index (CFI). These indices represented an absolute and an incremental (also called comparative) fit index. An absolute index directly assesses how well an *a priori* model reproduces the sample data, while an incremental index measures the proportionate improvement in fit by comparing a target model with a more restricted nested baseline model (Hu and Bentler 1995). S-Bχ^2, GFI, RMR, and RMSEA represent an absolute fit index, while AGFI and CFI symbolise an incremental fit index.

a. Satora-Bentler Chi-Square (S-B χ^2)

Chi-square (χ^2) is a test of whether the matrix of implied variances and covariances is significantly different to the matrix of empirical sample variances and covariances (Holmes-Smith 2001). This measure 'is valid if all assumptions are satisfied, if the model holds and the sample size is sufficiently large' (Jöreskog and Sörbom 1993 p. 121-122). When underlying distributional assumptions are violated a Satora-Bentler Chi-Square (S-B χ^2) is more appropriate as it is an adjusted chi-square statistic which attempts to correct the bias introduced when data are markedly non-normal in distribution (Garson 2006). In addition, 'the S-B χ^2 has been shown to be the most reliable test statistic for evaluating mean and covariance structure models under various distributions and sample sizes' (Byrne 2006 p. 136). Looking at this measurement, the S-B χ^2 should be insignificant with a p-value of >.05 (Jöreskog and Sörbom 1989; Gefen, Straub, and Boudreau 2000), as this indicates that the discrepancy between the implied variances (and covariances) and empirical sample variances and (covariances) is very small. Another way to judge the result of chi-square is by taking into account the degree of freedom. Hair et al. (1998) recommend the ratio of chi-square (χ^2) to degree of freedom (df) be between 1 and 2.

b. Root Mean Square Residual (RMR)

RMR measures the average difference between the implied variances (and covariances) matrix and the empirical sample variance (and covariance) matrix (Holmes-Smith 2001). The threshold for accepting the model fit is to have RMR below .05 (Gefen, Straub, and Boudreau 2000).

c. Root Mean Square Error of Approximation (RMSEA)

As with RMR, RMSEA is the discrepancy per degree of freedom; but, it differs from RMR in that the discrepancy is measured in terms of the population, not just the sample utilised for estimation (Steiger 1990). Holmes-Smith noted that RMSEA will

consider the error of approximation in the population and relaxes the strict requirement on chi-square that the model holds exactly in the population (2001). To be classified as an adequat fit, the model should have a RMSEA value of less than .05 (although values between .05 and .08 indicate reasonable fit) (Holmes-Smith 2001). Others recommend a cutoff value of ≤.06 (Hu and Bentler 1999). Another characteristic of RMSEA is that it is among the measures least affected by sample size (Fan, Thompson, and Wang 1999).

d. Goodness-of-Fit Index (GFI)

GFI is the most widely used goodness-of-fit measure in many studies of SEM. It 'measures the absolute fit (unadjusted for the degrees of freedom) of the combined measurement and structural model to the data' (Gefen, Straub, and Boudreau 2000 p. 35). The acceptable level of GFI is to have values greater than .95, although the value of .90 is deemed a reasonable fit (Holmes-Smith 2001).

e. Adjusted Goodness-of-Fit Index (AGFI)

To complement the measure of goodness-of-fit indices, the AGFI is proposed. AGFI adjusts the values of GFIs for the degree of freedom in the model (Gefen, Straub, and Boudreau 2000). The threshold for this index is greater than .90 or .95 (Holmes-Smith 2001).

f. Comparative Fit Index (CFI)

The Comparative Fit Index (CFI) was suggested by Bentler (1990) with the purpose of overcoming the deficiencies in the normed fit index (NFI) for a nested model. The NFI has the tendency to underestimate fit in small sized samples (Byrne 2006). Here, the comparative fit index compares whether the model under consideration is better than some baseline model, which in most cases is the null or independence model. The CFI ranges should fall between 0 and 1, with values exceeding .90 indicating a good fit to the data (Kelloway 1998). In cases where the value of CFI is above 1, there is an indication that the model is overfit as too many parameters have been freed to be estimated (Holmes-Smith 2001).

7.3.1.2 Model Re-specification/Modifications

Once the model has been run and output produced, the researcher's next task is to examine whether the result indicates goodness-of-fit or not of the particular model. The tools for examining the fit in detail are the residuals and standardised residuals, the modification indices, as well as the expected change. Each of these quantities

may be used to locate the source of misspecification and to suggest how the model should be modified to fit the data better (Jöreskog and Sörbom 1993).

Jöreskog and Sörbom (1993) explain in detail how the process of examining the model should be carried out. A residual is an observed minus a fitted covariance (variance). A standardised residual (SR) is a residual divided by its estimated standard error. A large positive residual indicates that the model underestimates the covariance between the two variables. On the other hand, a large negative residual indicates that the model overestimates the covariance between the variables. Meanwhile, the Modification Index (MI) measures how much chi-square is expected to decrease if a particular parameter is set free and the model is reestimated. Expected parameter change (EC) measures how much the parameter is expected to change, in the positive or negative direction, if it is set free. Modification indices are used in the process of model evaluation and modification. The process begins with the parameter that has the largest MI, but if it does not make sense to relax this, then the second largest MI is considered, and so forth. If the signs of certain parameters are specified *a priori*, positive or negative, the expected parameter change associated with the modification indices for these parameters can be used to exclude from the model parameters having the wrong sign. In case a problematic variable is identified, Holmes-Smith (2001) suggested estimating additional parameters or deleting that variable from the model. It is worth noting that although there were many studies dealing with model specification, no optimal strategy has been found yet (Schumacker and Lomax 2004). In this model re-specification, deleting instead of setting free the parameter for the sake of parsimony/simplicity (Holmes-Smith 2001; Sethi and King 1994) is applied. The result is shown in table 7.1 below.

Table 7.1: Assessment of Unidimensionality and Convergent Validity using the One-factor Congeneric Model

Item	**Fit Indices**
Autonomy	
Hypothesised Model	Auto3, Auto4, Auto5, Auto6 S-Bχ^2=8.53, df=2, χ^2/df=4.265, *p*-value=0.014, RMSEA=0.081, RMR=0.048, GFI=0.987, AGFI=0.933, CFI=0.987.
Iteration 1	Auto4, Auto5, Auto6 S-Bχ^2=0, df=0, *p*-value=1.000 *The model is saturated, the fit is perfect*.

	Auto3 shared significant error variance with Auto6 (MI=30.354). But their expected change (EC) was negative, which indicates the wrong sign (Jöreskog and Sörbom 1993). Thus, the second largest MI was examined. Auto3 shared significant error variance with Auto4 (MI=22.545), and their EC was positive. Since Auto3 had a lower loading than Auto4, then Auto3 was deleted. The results show the final model.
External Orientation	
Hypothesised Model	EO2, EO3, EO4, EO5 S-Bχ^2=15.98, df=2, χ^2/df=7.99, *p*-value=0.000, RMSEA=0.119, RMR=0.068, GFI=0.960, AGFI=0.800, CFI=0.988.
Iteration 1	EO2, EO3, EO4 S-Bχ^2=0, df=0, *p*-value=1.000 *The model is saturated, the fit is perfect*. EO2 shared significant error variance with EO5 (MI=202.807), with expected change (EC) being positive. As EO5 had a lower loading than EO2, then EO5 was deleted. The results show the final model.
Inter-departmental Coordination	
Hypothesised Model	IDC1, IDC2, IDC3, IDC4 S-Bχ^2=27.39, df=2, χ^2/df=13.695, *p*-value=0.000. RMSEA=0.160, RMR=0.090, GFI=0.917, AGFI=0.584, CFI=0.986.
Iteration 1	IDC1, IDC2, IDC3 S-Bχ^2=0, df=0, *p*-value=1.000 *The model is saturated, the fit is perfect*. Following Holmes-Smith's (2001) recommendation in dealing with problematic situation, IDC4 was deleted to improve model fit. IDC4 also had a lower loading than the other parameters. The results show the final model.
Human Resource Management	
Hypothesised Model	HRM1, HRM2, HRM5, HRM6 S-Bχ^2=39.37, df=2, χ^2/df=19.685, *p*-value=0.000. RMSEA=0.194, RMR=0.103, GFI=0.894, AGFI=0.470, CFI=0.974.
Iteration 1	HRM1, HRM2, HRM5 S-Bχ^2=0, df=0, *p*-value=1.000 *The model is saturated, the fit is perfect*. Following Holmes-Smith's (2001) recommendation in dealing with problematic situation, HRM6 was deleted to improve model fit. HRM6 also had a lower loading than the other parameters. The results show the final model.
Improvement Orientation	
Hypothesised Model	IO3, IO4, IO5, IO6 S-Bχ^2=0.10, df=2, χ^2/df=0.05, *p*-value=0.953, RMSEA=0.000, RMR=0.004, GFI=1.000, AGFI=0.999, CFI=1.000. No further re-specification was needed. The MI matrix and SR matrix were not shown by LISREL output, indicating that there were no non-zero modification indices and no SR values needed to be accounted for. The results show the final model.

Board of Commissioners	
Hypothesised Model	BOC3, BOC4, BOC8, BOC9 S-Bχ^2=24.58, df=2, χ^2/df=12.29, *p*-value=0.000, RMSEA=0.151, RMR=0.400, GFI=0.782, AGFI=0.088, CFI=0.988.
Iteration 1	BOC3, BOC8, BOC9 S-Bχ^2=0, df=0, *p*-value=1.000 *The model is saturated, the fit is perfect*. Following Holmes-Smith's (2001) recommendation in dealing with problematic situation, BOC4 was deleted to improve model fit. BOC4 also had a lower squared multiple correlations than the other parameters. The results show the final model.
Independent Committee	
Hypothesised Model	IC4, IC5, IC6, IC7 S-Bχ^2=21.73, df=2, χ^2/df=10.865, *p*-value=0.000, RMSEA=0.141, RMR=0.173, GFI=0.883, AGFI=0.417, CFI=0.991.
Iteration 1	IC4. IC5, IC6 S-Bχ^2=0, df=0, *p*-value=1.000 *The model is saturated, the fit is perfect*. Following Holmes-Smith's (2001) recommendation in dealing with problematic situation, IC7 was deleted to improve model fit. IC7 also had a lower loading than the other parameters. The results show the final model.
Audit Committee	
Hypothesised Model	AC6, AC7, AC8, AC9 S-Bχ^2=2.31, df=2, χ^2/df=1.155, *p*-value=0.315, RMSEA=0.018, RMR=0.029, GFI=0.986, AGFI=0.929, CFI=1.000. No further re-specification was needed. The MI matrix and SR matrix were not shown by LISREL output, indicating that there were no non-zero modification indices and no SR values needed to be accounted for. The results show the final model.
Board of Directors	
Hypothesised Model	BOD7, BOD8, BOD9, BOD17 S-Bχ^2=3.57, df=2, χ^2/df=1.785, *p*-value=0.168, RMSEA=0.040, RMR=0.023, GFI=0.986, AGFI=0.929, CFI=0.999. No further re-specification was needed. The MI matrix and SR matrix were not shown by LISREL output, indicating that there were no non-zero modification indices and no SR values needed to be accounted for. The results show the final model.
Internal Control Group	
Hypothesised Model	ICG1, ICG2, ICG3, ICG4 S-Bχ^2=2.83, df=2, χ^2/df=1.415, *p*-value=0.242, RMSEA=0.029, RMR=0.033, GFI=0.972, AGFI=0.862, CFI=0.999. ICG1 and ICG2 shared the largest standardised residual (SR=0.466). Since this value was well below the cut-off point of ±2.58 (Hair et al. 1998) there was no further re-specification. The results show the final model.

Codes of Conduct	
Hypothesised Model	COC4, COC5, COC6, COC7 S-Bχ^2=3.66, df=2, χ^2/df=1.83, *p*-value=0.160, RMSEA=0.041, RMR=0.043, GFI=0.983, AGFI=0.916, CFI=0.999. No further re-specification was needed. The MI matrix and SR matrix were not shown by LISREL output, indicating that there were no non-zero modification indices and no SR values needed to be accounted for. The results show the final model.
Organisational Performance	
Hypothesised Model	OP2, OP4, OP5, OP6 S-Bχ^2=0.91, df=2, χ^2/df=0.455, *p*-value=0.635, RMSEA=0.000, RMR=0.009, GFI=0.993, AGFI=0.965, CFI=1.000. OP6 and OP5 shared the smallest standardised residual (SR=-0.213). As the critical point was ±2.58 (Hair et al. 1998), then no further specification was needed. The results show the final model.

The results of the analysis of the one-factor congeneric models are presented in the following tables. Table 7.2 shows the results of parameter estimates, and table 7.3 presents overall model fit for the analysis of the one-factor congeneric models. The satisfactoriness of the one-factor congeneric models was based on *t*-values (shown in table 7.2), Satorra Bentler Chi-Square (S-Bχ^2), *p*-value, RMSEA, RMR, GFI, AGFI, and CFI (Shown in table 7.3).

Table 7.2: Results of Parameter Estimates of Final One-Factor Congeneric Models

Items	Standardised Loading	Squared Multiple Correlations	Standard Errors	t-values
Autonomy (Auto)				
Auto4	0.638	0.407	0.053	12.902
Auto5	0.693	0.480	0.074	11.744
Auto6	0.731	0.534	0.096	13.392
External Orientation (EO)				
EO2	0.733	0.538	0.054	18.093
EO3	0.912	0.832	0.036	31.255
EO4	0.791	0.626	0.069	23.610
Inter-departmental Coordination (IDC)				
IDC1	0.928	0.861	0.037	39.340
IDC2	0.956	0.913	0.034	56.184
IDC3	0.812	0.660	0.051	28.681

Human Resource Management (HRM)				
HRM1	0.854	0.729	0.046	23.780
HRM2	0.916	0.839	0.029	38.613
HRM5	0.742	0.550	0.055	22.803
Improvement Orientation (IO)				
IO3	0.826	0.682	0.059	20.539
IO4	0.870	0.757	0.033	40.369
IO5	0.734	0.539	0.027	33.547
IO6	0.781	0.610	0.047	22.905
Board of Commissioners (BOC)				
BOC3	0.803	0.645	0.117	18.267
BOC8	0.947	0.897	0.038	41.630
BOC9	0.955	0.912	0.055	55.983
Independent Commissioners (IC)				
IC4	0.960	0.922	0.043	55.934
IC5	0.981	0.962	0.022	77.267
IC6	0.883	0.781	0.063	37.061
Audit Committee (AC)				
AC6	0.889	0.790	0.032	39.205
AC7	0.843	0.711	0.060	25.199
AC8	0.927	0.859	0.038	41.037
AC9	0.908	0.824	0.032	41.282
Board of Directors (BOD)				
BOD7	0.924	0.854	0.021	57.104
BOD8	0.927	0.859	0.020	65.888
BOD9	0.875	0.766	0.032	33.690
BOD17	0.795	0.632	0.051	23.769
Internal Control Group (ICG)				
ICG1	0.835	0.697	0.051	19.172
ICG2	0.919	0.845	0.034	33.880
ICG3	0.899	0.808	0.039	29.293
ICG4	0.779	0.607	0.051	22.519
Codes of Conduct (COC)				
COC4	0.846	0.716	0.041	34.470
COC5	0.907	0.823	0.032	47.447
COC6	0.890	0.792	0.053	30.169
COC7	0.904	0.817	0.056	40.454
Organisational Performance (OP)				
OP2	0.884	0.781	0.023	38.301
OP4	0.797	0.635	0.025	31.338
OP5	0.947	0.897	0.023	40.867
OP6	0.868	0.753	0.035	23.075

It was noted that the observed variables *Auto4* and *Auto5* squared multiple correlations below the threshold of .50 as suggested by the literature (Holmes-Smith 2001). Keeping the above variables was based on the following reasons. Firstly, their *t*-values were significant (greater than ± 1.96 at 5% significance level) (Sethi and King 1994). Secondly, as explained in more detail in a previous chapter (see Chapter 2: Literature Review), they were important variables which were derived from the literature review and empirical studies.

Table 7.3: Overall Model Fit for Final One-Factor Congeneric Models

Items	**SBχ^2 (df)**	***p*-value**	**RMSEA**	**RMR**	**GFI**	**AGFI**	**CFI**
Autonomy (Auto)	0(0)	1.000	0.000	0.000	1.000	1.000	1.000
External Orientation (EO)	0(0)	1.000	0.000	0.000	1.000	1.000	1.000
Inter-departmental Coordination (IDC)	0(0)	1.000	0.000	0.000	1.000	1.000	1.000
Human Resource Management (HRM)	0(0)	1.000	0.000	0.000	1.000	1.000	1.000
Improvement Orientation (IO)	0.10 (2)	0.953	0.000	0.004	1.000	0.999	1.000
Board of Commissioners (BOC)	0(0)	1.000	0.000	0.000	1.000	1.000	1.000
Independent Commissioners (IC)	0(0)	1.000	0.000	0.000	1.000	1.000	1.000
Audit Committee (AC)	2.31 (2)	0.315	0.029	0.018	0.986	0.929	1.000
Board of Directors (BOD)	3.57 (2)	0.168	0.041	0.023	0.986	0.929	0.999
Internal Control Group (ICG)	2.83 (2)	0.242	0.029	0.033	0.972	0.862	0.999
Codes of Conduct (COC)	3.66 (2)	0.160	0.041	0.043	0.983	0.916	0.999
Organisational Performance (OP)	0.91 (2)	0.635	0.000	0.009	0.993	0.965	1.000

Initially, there were 48 observed variables and 12 unobserved variables in the models. Following the analysis of the one-factor congeneric models, there were 42 observed variables remaining. These variables are presented in table 7.4 below.

Table 7.4: The Results of the One-Factor Congeneric Measurement Model on Each Construct

Autonomy (Auto)

Auto4	Employees influence important decisions concerning work.
Auto5	There is freedom for employees to plan their own work.
Auto6	There is an opportunity for employees to bring forward ideas before decisions are made.

External Orientation (EO)

EO2	There is an investigation of the wishes and needs of customers.
EO3	There is active canvassing of new customers.
EO4	Company is working to improve the local market position.

Inter-Departmental Coordination (IDC)

IDC1	There is useful cooperation between departments.
IDC2	There is exchange of useful information between departments
IDC3	Departments support one another in the resolution of problems

Human Resource Management (IDC)

HRM1	Performance appraisals are taken seriously.
HRM2	Employees obtain useful information about their functioning
HRM5	Employees are told when a good job is done.

Improvement Orientation (IO)

IO3	There are initiatives taken by employees to improve the way in which the work is done.
IO4	New and improved ways to do work are continually adopted.
IO5	Employees try to be pioneers.
IO6	People put in maximum effort.

Board of Commissioners (BOC)

BOC3	BOC ensures that BOD complies with Articles of Association
BOC8	BOC ensures that BOD protects the interests of shareholders.
BOC9	BOC ensures that BOD protects the interests of stakeholders.

Independent Commissioners (IC)

IC4	IC ensures that company establishes control system.
IC5	IC ensures that company establishes audit system
IC6	IC ensures that company complies with regulations.

Audit Committee (AC)

AC6	AC creates disciplines and control which lessen the possibility the company being jeopardised
AC7	AC empowers internal audit.
AC8	AC promotes adequate structures of internal control.
AC9	AC improves the quality of financial disclosure and reporting.

Board of Directors (BOD)

BOD7	BOD creates an ethical environment.
BOD8	BOD creates a proper human resource management function.
BOD9	BOD enforces codes of conduct.
BOD17	BOD ensures transparency in the financial framework of the company.

Internal Control Group (ICG)

ICG1	ICG creates policies to secure the assets of the company.
ICG2	ICG creates policies to increase the operational efficiency and effectiveness of the company.
ICG3	ICG develops the reliability and the comprehensiveness of accounting/financial information.
ICG4	ICG ensures compliance with the applicable policies and regulatory requirements.

Codes of Conduct (COC)

	My company has codes of conduct which
COC4	… make certain that no one engages in activities that jeopardise the company's reputation.
COC5	… treat all stakeholders fairly and honestly.
COC6	… develop mechanisms where violations of company policy can be reported without fear of retribution.
COC7	… create an environment in which the decisions of the company's organs are obeyed.

Organisational Performance (OP)

	In your opinion, to what degree does your organisation **need to improve** in the following performance criteria?
OP2	Customer satisfaction
OP4	Professional behaviour
OP5	Service quality
OP6	Contact with clients.

7.3.1.3 Test of Reliability and Validity of Measurement Model

As suggested by Venkatraman (1989), following the one-factor congeneric test, the measurement part of structural equation modelling was continued by assessing the reliability and validity of variables. It is also the recommendation of Holmes-Smith (2001) that evidence of reliability and validity tests be provided in order for research to be classified as 'good' research. In accordance with the above suggestions, the following sections present the results of the reliability and validity tests.

7.3.1.3.1 Measurement of Reliability

a. Measurement of Reliability of Observed Variables

The reliability of observed variables can be measured by squared multiple correlations. Basically, the squared multiple correlations are the squares of the standardised loadings of the observed variables. The squared multiple correlations should exceed .50, which is roughly equivalent to a standardised loading of .70 (Holmes-Smith 2001). Table 7.2, column 3 above shows the values of the squared multiple correlations.

b. Measurement of Construct Reliability

In assessing the reliability of multiple measures for an individual construct, the internal consistency measure developed by Fornell and Larcker (1981) was applied. This measure is equivalent to composite reliability (Chin 1998). Compared to Cronbach's alpha, this measure is believed to be superior since it uses the item loadings obtained within the causal model, is not influenced by the number of indicators within the construct, and is more general (Barclay, Higgins, and Thompson 1995; Hulland 1999). Fornell and Larcker's formula is as follow:

$$\rho_{\eta} = \frac{(\Sigma\lambda_i)^2}{(\Sigma\lambda_i)^2 + \Sigma\delta_i}$$

where λ_i = Standardised loading

δ_i = Measurement Error.

A commonly used threshold value for acceptable reliability is .50, which roughly corresponds to a standardised loading of .70 (Hair et al. 1998; Holmes-Smith 2001).

c. Variance Extracted Estimate

Another measure of construct reliability is the variance extracted estimate. This reflects the overall amount of variance in the indicators accounted for by the latent construct. Fornell and Larcker (1981) developed the formula for assessing this estimate, which is:

$$\rho_{vc\eta} = \frac{(\Sigma\lambda_i^2)}{(\Sigma\lambda_i^2) + \Sigma\delta_i}$$

where λ_i = Standardised loading

δ_i = Measurement Error.

Higher variance extracted values occur when the indicators are truly representative of the latent construct. The variance extracted measure is a complementary measure to the construct reliability. Guidelines suggest that the variance extracted value should exceed .50 for a construct (Hair et al. 1998; Holmes-Smith 2001).

Table 7.5 below presents the results of the construct reliability and variance extracted estimate measures. The table indicates that all constructs had good

construct reliability (>.50). All but one had variance extracted estimates >.50. The construct that had a variance extracted estimate less than .50 was Autonomy (0.474). Given this, there was the possibility of dropping this construct from subsequent analysis. However, considering that the construct reliability of the construct Autonomy was very good (0.729) and taking into consideration that variance extracted estimate is a complementary measure, the study decided to maintain this construct. In addition, past literature and empirical studies support the existence of this construct (Van den Berg and Wilderom 2004; Van Muijen et al. 1999).

Table 7.5: Construct Scale Reliability and Variance Extracted Estimate

Constructs	Construct Scale Reliability	Variance Extracted Estimate
Autonomy (Auto)	0.729	0.474
External Orientation (EO)	0.855	0.665
Inter-departmental Coordination (IDC)	0.928	0.881
Human Resource Management (HRM)	0.877	0.706
Improvement Orientation (IO)	0.891	0.673
Board of Commissioners (BOC)	0.931	0.818
Independent Commissioners (IC)	0.960	0.888
Audit Committee (AC)	0.940	0.796
Board of Directors (BOD)	0.933	0.777
Internal Control Group (ICG)	0.985	0.944
Codes of Conduct (COC)	0.936	0.787
Organisational Performance (OP)	0.929	0.710

7.3.1.3.2 Measure of Convergent Validity

Convergent validity measures the magnitude of the direct structural relationship between an observed variable and a latent construct. It is achieved when this relationship (factor loading) is significant from zero (Holmes-Smith 2001). At 5% significance level the *t*-value of the parameter should be higher than 1.96. In this regard, structural equation modelling provides an input for calculating convergent validity. By looking table 7.2, column 5, it can be seen that all 42 observed variables employed in this study had *t*-values higher than the benchmark of 1.96.

7.3.1.3.3 Measure of Discriminant Validity

Another measure of validity is discriminant validity (Venkatraman 1989). This represents the extent to which the constructs in a model are different. Constructs are supposed to be not highly correlated, as they are measuring different concepts. Therefore, a correlation between constructs that is greater than .80 or .90 represents a

lack of discriminant validity (Holmes-Smith 2001). Fornel and Larcker (1981) recommend that discriminant validity is fulfilled if the average variance extracted for two constructs is greater than the square of the correlation between the two constructs.

Following the above recommendations, table 7.6 and table 7.7 report the correlations between constructs and the comparison of average variance extracted and square of correlation between constructs respectively. It is observed that, firstly, none of correlations between constructs was equal or higher than the threshold of .80. Secondly, all average variance extracted between two constructs was greater than their square of correlation. Accordingly, the discriminant validity of this study is satisfied.

Table 7.6: Correlations among Constructs

	Auto	EO	IDC	HRM	IO	BOC	IC	AC	BOD	ICG	COC	OP
Auto	1											
EO	0.389	1										
IDC	0.387	0.587	1									
HRM	0.377	0.607	0.635	1								
IO	0.397	0.570	0.494	0.684	1							
BOC	0.263	0.434	0.498	0.512	0.439	1						
IC	0.219	0.464	0.487	0.460	0.433	0.696	1					
AC	0.282	0.561	0.539	0.593	0.546	0.659	0.697	1				
BOD	0.337	0.533	0.612	0.725	0.554	0.711	0.581	0.725	1			
ICG	0.189	0.464	0.480	0.532	0.470	0.462	0.524	0.662	0.603	1		
COC	0.311	0.535	0.573	0.697	0.519	0.569	0.465	0.647	0.739	0.568	1	
OP	0.109	0.020	0.048	0.085	0.045	0.052	-0.013	0.044	0.076	0.073	0.122	1

Table 7.7: Assessment of Discriminant Validity

	Constructs	Average Variance Extracted	Square of Correlation between Construct	AVE>SC?
Auto with	*EO*	0.569	0.183	Yes
	IDC	0.643	0.169	Yes
	HRM	0.590	0.131	Yes
	IO	0.595	0.158	Yes
	BOC	0.646	0.078	Yes
	IC	0.681	0.057	Yes
	AC	0.658	0.080	Yes
	BOD	0.647	0.114	Yes
	ICG	0.626	0.036	Yes
	COC	0.653	0.097	Yes
	OP	0.641	0.012	Yes
EO with	*IDC*	0.739	0.368	Yes
	HRM	0.687	0.365	Yes
	IO	0.677	0.319	Yes
	BOC	0.742	0.231	Yes
	IC	0.778	0.238	Yes
	AC	0.741	0.338	Yes
	BOD	0.730	0.301	Yes
	ICG	0.708	0.237	Yes
	COC	0.735	0.295	Yes
	OP	0.723	0.000	Yes
IDC with	*HRM*	0.760	0.419	Yes
	IO	0.740	0.266	Yes
	BOC	0.816	0.255	Yes
	IC	0.851	0.258	Yes
	AC	0.803	0.316	Yes
	BOD	0.793	0.372	Yes
	ICG	0.771	0.241	Yes
	COC	0.798	0.328	Yes
	OP	0.786	0.003	Yes
HRM with	*IO*	0.695	0.475	Yes
	BOC	0.763	0.293	Yes
	IC	0.798	0.251	Yes
	AC	0.758	0.381	Yes
	BOD	0.748	0.546	Yes
	ICG	0.725	0.309	Yes
	COC	0.721	0.516	Yes
	OP	0.741	0.005	Yes
IO with	*BOC*	0.743	0.228	Yes
	IC	0.773	0.210	Yes
	AC	0.741	0.299	Yes
	BOD	0.732	0.308	Yes
	ICG	0.713	0.223	Yes

	COC	0.736	0.270	Yes
	OP	0.726	0.002	Yes
BOC with	*IC*	0.855	0.534	Yes
	AC	0.807	0.494	Yes
	BOD	0.797	0.539	Yes
	ICG	0.774	0.285	Yes
	COC	0.800	0.352	Yes
	OP	0.789	0.003	Yes
IC with	*AC*	0.837	0.549	Yes
	BOD	0.826	0.393	Yes
	ICG	0.804	0.359	Yes
	COC	0.830	0.252	Yes
	OP	0.819	0.000	Yes
AC with	*BOD*	0.788	0.526	Yes
	ICG	0.768	0.438	Yes
	COC	0.791	0.420	Yes
	OP	0.781	0.002	Yes
BOD with	*ICG*	0.759	0.364	Yes
	COC	0.782	0.546	Yes
	OP	0.772	0.006	Yes
ICG with	*COC*	0.763	0.323	Yes
	OP	0.753	0.005	Yes
COC with	*OP*	0.777	0.015	Yes

7.3.2 Confirmatory Factor Analysis - Second Order

Theoretically, as shown in the research model (Figure 3.1, page 48) organisational culture and internal corporate governance are second-order constructs. In this regard, the first-order factors are explained by a higher order structure. The first-order factors or constructs of *Autonomy (Auto), External Orientation (EO), Inter-Departmental Coordination (IDC), Human Resource Management (HRM)* and *Improvement Orientation (IO)* belong to the higher (second-order) construct of **Organisational Culture**. Meanwhile, the first-order constructs of *Board of Commissioners (BOC)*, *Independent Commissioners (IC)*, *Audit Committee (AC)*, *Board of Directors (BOD)*, *Codes of Conduct (COC)* and *Internal Control Groups (ICG)* reflects the second-order construct of **Internal Corporate Governance**.

Confirmatory second-order factor analysis was initially introduced by Jöreskog (1970). Basically, every first-order construct is assumed to be a function of two components, namely a component that is shared with the other primary factors and corresponds to the construct of interest, and a component unique to that factor (Gerbing, Hamilton, and Freeman 1994). In doing so, each first-order construct's contribution to

the second-order construct is quantified by the corresponding coefficient and is directly related to the second-order construct. This practice was believed to be superior to summing all the items that define a measurement scale and inserting only the corresponding total score into the structural part. Gerbing and Anderson (1988) acknowledged that the summation procedure was simple, but they noted the cost of a loss of rigor and meaning as the procedure ignored the relations of individual items with each other and the latent variables. In proposing the second-order factor analysis Gerbing, Hamilton and Freeman (1994) recommended that beside having the advantage of evaluating construct validity with goodness-of-fit indices, this perspective provides the conceptual advance of providing a definite definition of the domains of content that operationalise the construct of the interest.

First of all, to properly specify a second-order construct it is important to ensure that all first-order constructs are unidimensional (Kotha, Vadlamani, and Nair 1997). In this regard, this requirement was fully satisfied as shown in the above sections and tables depicting the Tests of Reliability and Validity of Measurement. To evaluate the fit of the second-order construct, researchers recommend the use of CFI along with other fit indices (Gerbing, Hamilton, and Freeman 1994). Although the common fit indices such as chi-square, GFI, AGFI, and RMSEA/RMR were in practice applied in many studies of second-order constructs (e.g., Kaplan and Elliott 1997; Farmer et al. 1997) it is for the sake of completeness of goodness-of-fit indices that CFI is called for. This index was indeed applied in the not so recent study of Goldman, Greenbaum andDarkes (1997), and in more recent studies of Hagger and Chatzisarantis (2005) and Laroche et al.(2005). Marsh (1994) applied the RNI (Relative Non-centrality Index), which is essentially the same as CFI, in his study of confirmatory factor analysis on second-order constructs. The results of second-order confirmatory factor analysis are presented below.

7.3.2.1 Second-Order Confirmatory Factor Analysis — Organisational Culture

Based on the results of the one-factor congeneric measurement model presented in table 7.2 above, there were 16 remaining observed variables which were utilised for performing second-order confirmatory factor analysis of the organisational culture construct. These variables are modelled in the following figure:

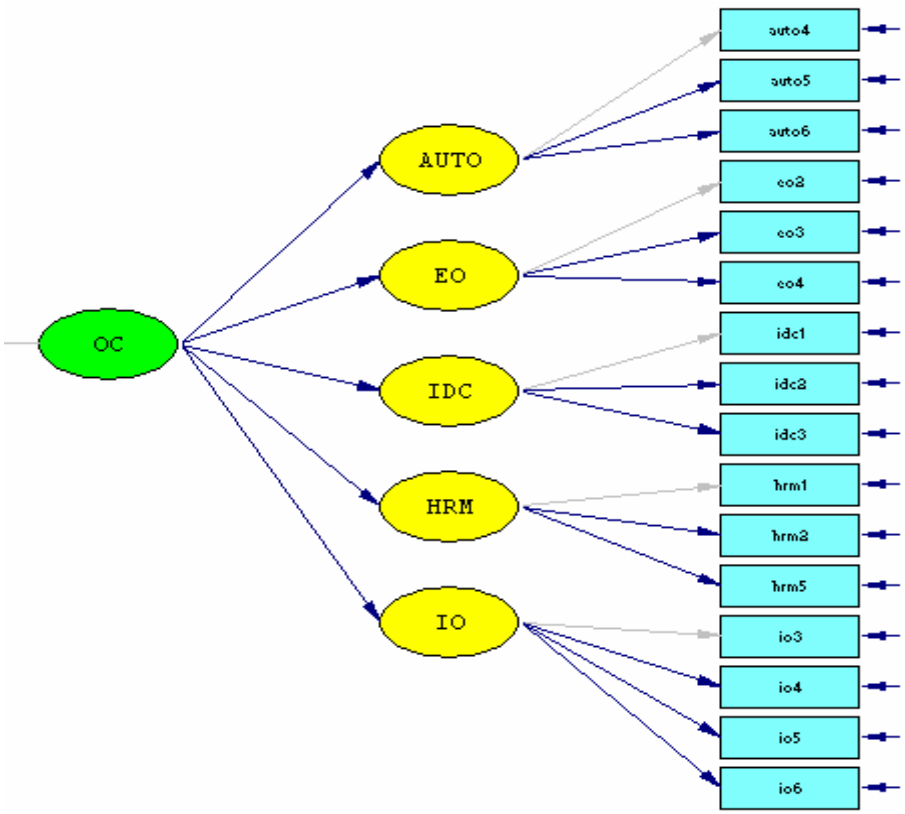

Figure 7.1: Second-Order Construct of Organisational Culture

In this part, the processes of searching model fit are depending upon the remaining number of parameters. If possible to drop a parameter, then this action would be executed otherwise the parameters are set free. Thus, the study combines the recommendation of Holmes-Smith (2001), namely freeing or deleting parameters. Table 7.8 below summarises the processes of model re-specifications for the organisational culture construct.

Table 7.8: Model Re-specification of Organisational Culture Construct

Overall Fit Indices	Initial Model	Iteration 1	Iteration 2	Iteration 3	Iteration 4	Iteration 5	Iteration 6	Iteration 7	Iteration 8 (Final)
S-Bχ^2 (df)	171.286 (99)	145.240 (85)	125.360 (72)	101.680 (60)	98.320 (59)	95.130 (58)	71.760 (47)	67.300 (46)	49.950 (36)
***p*-value**	0.00001	0.00005	0.0010	0.00063	0.0010	0.00152	0.01151	0.02191	0.06102
RMSEA	0.038	0.038	0.039	0.037	0.037	0.036	0.033	0.031	0.028
RMR	0.122	0.113	0.114	0.108	0.109	0.107	0.0961	0.0968	0.0858
GFI	0.918	0.925	0.931	0.939	0.940	0.942	0.953	0.956	0.964
AGFI	0.887	0.895	0.900	0.907	0.908	0.910	0.922	0.925	0.933
CFI	0.994	0.994	0.994	0.995	0.995	0.995	0.996	0.997	0.997

Iteration 1	EO4 shared significant error variance with IO5 (MI=15.388). But their expected change (EC) was negative, which indicate the wrong sign (Jöreskog and Sörbom 1993). Thus, the second largest MI was examined. IDC3 shared significant error variance with HRM5 (MI=12.158), and their EC was positive. HRM5 also shared significant SR with EO2 (=7.565), EO3 (=6.719), and IO6 (=5.687). All SR values were higher than the threshold of ±2.58 (Hair et al. 1998). Since HRM5 had a lower loading than IDC3 (0.767 and 0.822 respectively), HRM5 was dropped.
Iteration 2	EO4 shared significant error variance with IO5 (MI=15.520). However, their expected change (EC) was negative, which indicate the wrong sign (Jöreskog and Sörbom 1993). Thus, the second largest MI was examined. EO2 shared significant error variance with HRM2 (MI=11.601) and their EC was positive. EO2 also shared significant SR with Auto6 (=3.140), IDC2 (=2.844), HRM1 (=3.587), and HRM2 (=6.125). All SR values were above the threshold of Hair et al. (1998). As the loading of EO2 was lower than HRM2 (0.763 and 0.885 respectively), EO2 was dropped.
Iteration 3	EO5 shared significant error variance with IO5 (MI=15.018). But their expected change (EC) was negative, which indicate the wrong sign (Jöreskog and Sörbom 1993). Thus, the second largest MI was examined. Auto5 shared significant error variance with IO3 (MI=10.644) and their EC was positive. Auto5 also shared significant SR with HRM1 (=-3.216), HRM2 (=-3.533), and Auto4 (=3.539). All SR values were above the threshold of Hair et al. (1998). Since the loading of Auto5 was lower than the loading of IO3 (0.634 and 0.814 respectively), Auto5 was dropped.
Iteration 4	Two pairs of indicators shared the largest significant error variance with negative ECs. These were: EO4-IO5 (MI=14.874; EC=-0.170), and IDC2-HRM1 (MI=10.232; EC=-0.103). Consequently, the model re-specification was directed to the third largest pairs – EO4 and IO4 – in which the MI=8.262 and EC=0.164. EO4 had a lower loading than IO4 (0.830 and 0.876 respectively). Considering the remaining items construct EO were only 2 items, dropping EO4 would have contributed to the condition of empirical underindentification. As a consequence, these parameters were set free. From a substantive perspective, it would be reasonable that having continually adopted new and improve ways to do work would improve the local market position of the company.

Iteration 5	Five pairs of indicators shared the largest significant error variance with negative ECs. These were: EO4-IO5 (MI=11.459; EC=-0.163), IDC2-HRM1 (MI=10.357; EC=-0.104), EO4-HRM1 (MI=9.100; EC=-0.151), Auto4-EO3 (MI=8.419; EC=-0.101), and EO3-IO3 (MI=8.100; EC=-0.102). With the sixth largest significant error variance was the pair of HRM1-IO4 (MI=7.960), and with positive EC (0.090), model re-specification was directed to this pair. Additionally, IO4 shared SR with IDC2 (=-3.148). Considering the remaining items construct HRM were only 2 items, dropping HRM1 would have contributed to the condition of empirical underindentification. Thus, these parameters were set free. From a substantive perspective, taking performance appraisals seriously are judged to be a motivation for employee to continually adopt the new and improved ways to do work.
Iteration 6	HRM1 shared significant error variance with IO6 (MI=13.929 with EC=0.136). IO6 also shared significant SR with EO3 (=4.244), IDC3 (=3.507), and HRM2 (=4.105). Since IO6 had a lower loading than HRM1 (0.795 and 0.880 respectively), IO6 was dropped.
Iteration 7	EO3 shared significant error variance with IO4 (MI=30.660 with EC=0.431). EO3 also shared significant SR with HRM2 (=-2.613) and IO4 (=3.366). Dropping one of these two items would have contributed to the condition of empirical underindentification. Consequently, these parameters were set to free. From a substantial standpoint, an active canvassing of new customer was supported by continually adopting the new and improved ways to do work.
Iteration 8	The first pair of indicators shared the largest significant error variance with negative EC. This was EO4-IO5 (MI=12.362; EC=-0.192). As the second largest pair of indicators that shared the largest significant error variance (MI=9.009) with positive EC, the pair of EO3-IO5 was subject to model re-specification. IO5 also shared SR with IDC1 (=-2.802), IDC2 (=-3.489) and HRM1 (=3.378). All SR values were higher than the threshold of ±2.58 (Hair et al. 1998). Since the loading of IO5 was lower than EO3 (0.822 and 0.867 respectively), IO5 was dropped. The result showed the final model.

From iteration 8 or the final model, it was shown that most of fit indices satisfied the benchmarks applied to this study. The ratio of S-Bχ^2/df was 1.388, which is within the threshold range of 1-2; the *p*-value was well above the .05 benchmark (=0.06102); RMSEA was well below the .05 cut-off point (=0.028); GFI and AGFI showed very good values (=0.964 and 0.933 respectively); and CFI was excellent. The RMR score was not as good as the recommended benchmark of less than or equal to .05. However, since the RMSEA index was excellent, and RMSEA is superior to RMR in terms of its characteristic of being less affected by sample size (Fan, Thompson, and Wang 1999), this study considered that goodness-of-fit indices were satisfactory. The remaining indicators or observed variables of the second-order construct of organisational culture are shown in figure 7.2.

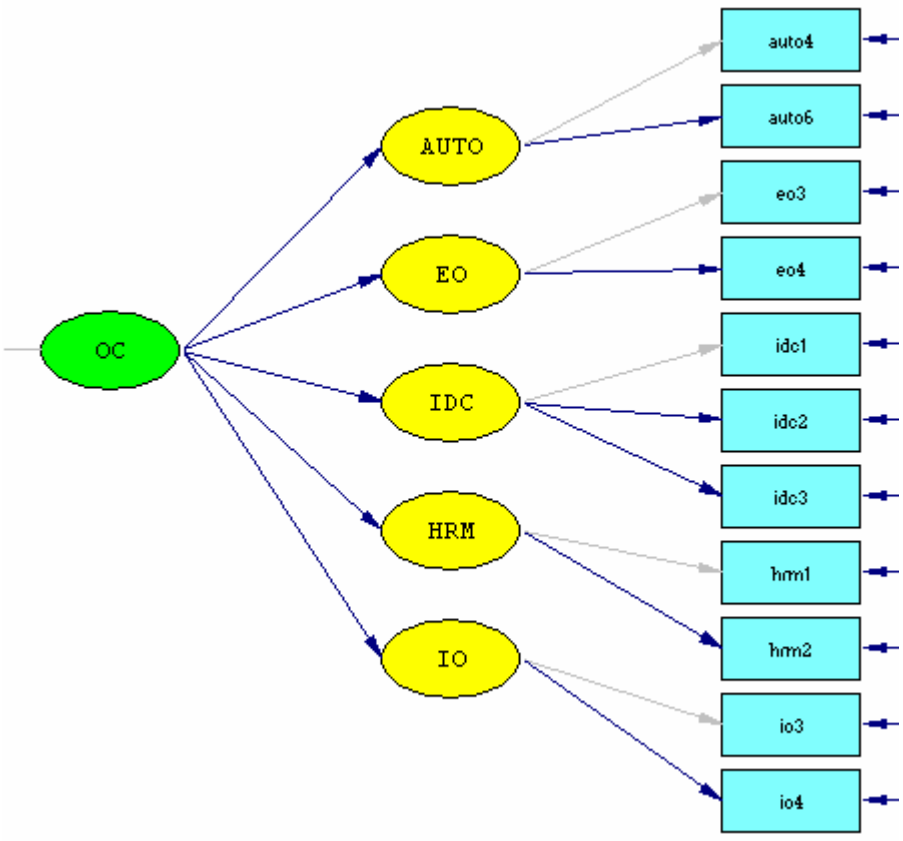

Figure 7.2: The Remaining indicators of the Second-Order Construct of Organisational Culture

7.3.2.2 Second-Order Confirmatory Factor Analysis — Internal Corporate Governance

Based on the results of the one-factor congeneric measurement model presented in table 7.2 above, there were 22 remaining observed variables to be utilised for performing second-order confirmatory factor analysis of the internal corporate governance construct. These variables are modelled in the following figure:

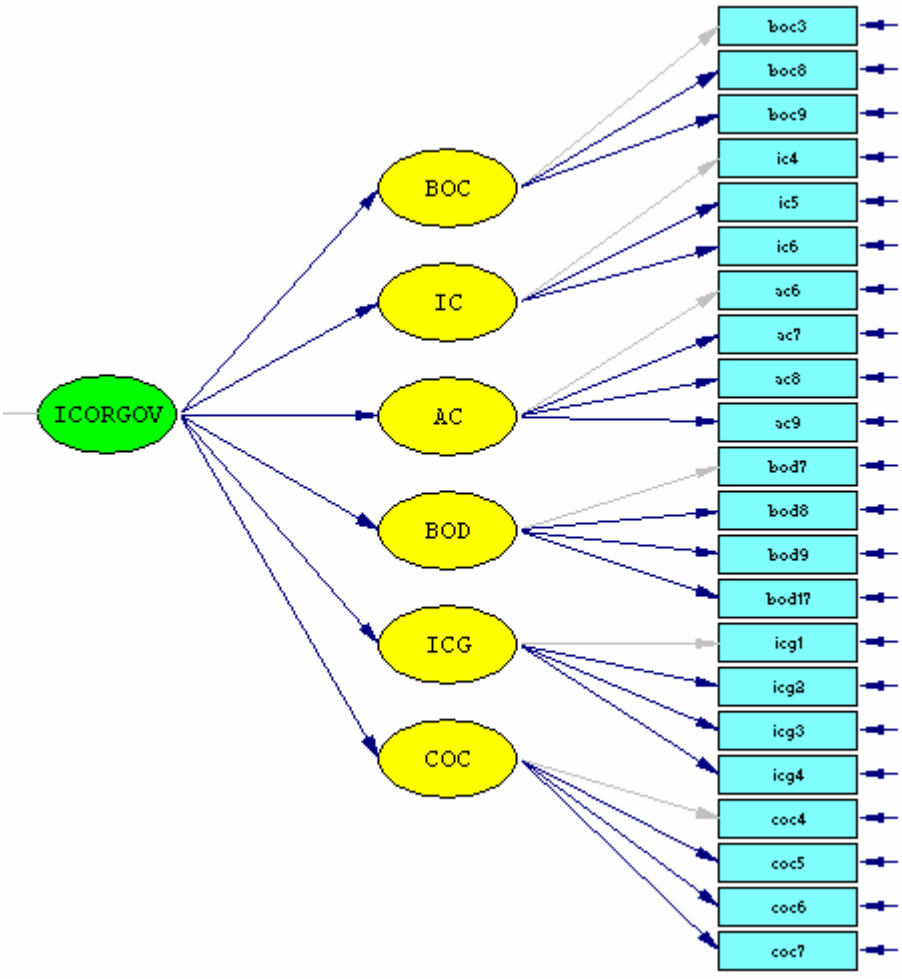

Figure 7.3: Second-Order Construct of Internal Corporate Governance

In this part, the processes of searching model fit depend upon the remaining number of parameters. If possible to drop parameter, then this action would be executed otherwise the parameters are set free. Thus, the study combines the recommendation of Holmes-Smith (2001), namely freeing or deleting parameters. Table 7.9 below summarises the processes of model re-specifications for the internal corporate governance construct.

Table 7.9: Model Re-specification for the Internal Corporate Governance Construct

Overall Fit Indices	Initial Model	Iteration													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
S-Bχ^2 (df)	313.61 (203)	288.65 (183)	254.71 (164)	211.58 (146)	179.74 (129)	164.74 (113)	163.67 (112)	145.47 (97)	123.77 (83)	97.80 (70)	81.76 (58)	79.76 (57)	77.87 56)	76.62 (55)	61.63 (45)
p-value	0.000	0.000	0.000	0.000	0.002	0.001	0.001	0.001	0.025	0.016	0.022	0.025	0.028	0.029	0.050
RMSEA	0.033	0.034	0.033	0.030	0.028	0.030	0.031	0.032	0.032	0.028	0.029	0.028	0.028	0.028	0.027
RMR	0.233	0.239	0.237	0.237	0.190	0.198	0.197	0.208	0.210	0.160	0.156	0.157	0.158	0.157	0.163
GFI	0.851	0.860	0.869	0.885	0.896	0.898	0.899	0.903	0.912	0.927	0.933	0.935	0.936	0.938	0.948
AGFI	0.815	0.823	0.832	0.850	0.862	0.862	0.862	0.865	0.873	0.891	0.895	0.896	0.897	0.909	0.909
CFI	0.997	0.997	0.997	0.997	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.998	0.999
Iteration 1	IC4 shared the largest significant error covariance with AC8 (MI=25.149 with positive EC=0.144). AC8 also shared a significant SR with ICG4 (=3.699). Since AC8 had a lower loading than IC4 (0.920 and 0.967 respectively), AC8 was dropped.														
Iteration 2	There were two pairs of indicators which shared the largest significant error variance, but with negative ECs: BOD7-ICG3 (MI=23.425; EC=-0.085) and BOC8-ICG3 (MI=23.005; EC=-0.098). Thus model re-specification was directed to the third largest pair that shared significant error variance. That was AC6-COC6 (MI=20.125; EC=0.135). COC6 also shared SR with BOC8 (=-4.051), BOC9 (=-3.166), IC4 (=-4.648), IC5 (=-6.025), and AC7 (=-4.357). All the SR values were above the ±2.58 threshold of Hair et al. (1998). As the loading of COC6 was lower than AC6 (0.881 and 0.913 respectively), COC6 was dropped.														
Iteration 3	Three pairs of indicators shared the largest significant error variance, but with negative ECs. These were: BOD7-ICG3 (MI=23.170; EC=-0.084), BOC8-ICG3 (MI=22.924; EC=-0.098), and BOC3-ICG2 (MI=17.819; EC=-0.192). With the fourth largest significant error variance was the pair of BOD17-ICG4 (MI=16.877), and with positive EC (0.164), model re-specification was directed to this pair. Additionally, ICG4 shared SR with IC4 (=3.390), IC5 (=3.669), IC6 (=5.019), AC (=2.936), AC7 (=8.590), AC9 (=3.438), BOD17 (=5.593), COC5 (=3.534), and COC7 (=3.367). All SR values were higher than the benchmark of Hair et al. (1998). Since ICG4 had a lower loading than BOD17 (0.794 and 0.813 respectively), ICG4 was dropped.														
Iteration 4	BOC3 shared significant error variance with ICG3 (MI=23.220 with EC=0.244). BOC3 also shared significant SR with BOD17 (=6.629), and COC5 (=2.999). Since BOC3 had a lower loading than ICG3 (0.814 and 0.882 respectively), BOC3 was dropped.														
Iteration 5	There were two pairs of indicators which shared the largest significant error variance, but with negative ECs: BOD17-ICG3 ((MI=18.864; EC=-0.080), and BOC9-COC4 (MI=12.207; EC=-0.204).														

	Thus model re-specification was directed to the third largest pair that shared significant error variance. That was AC9-ICG3 (MI=11.718; EC=0.086). As the loading of AC9 was lower than ICG3 (0.880 and 0.882 respectively), AC9 was dropped.
Iteration 6	Four pairs of indicators shared the largest significant error variance, but with negative ECs. These were: BOD7-ICG3 (MI=18.002; EC=-0.078), BOC9-COC4 (MI=12.492; EC=-0.206), BOD8-ICG1 (MI=10.646; EC=-0.070), and BOC8-ICG3 (MI=9.751; EC=-0.068). With the fifth largest significant error variance was the pair of IC4-AC7 (MI=8.310), and with positive EC (0.117), model re-specification was directed to this pair. Dropping one of these two items would have contributed to the condition of empirical underindentification. Consequently, these parameters were set to free. From a substantive point of view, fulfilling the duties of AC of empowering internal audit provides assurances to IC that company establishes control system. Consequently, these parameters were set to free.
Iteration 7	There were four pairs of indicators which shared the largest significant error variance, but with negative ECs: BOD1-ICG3 ((MI=17.944; EC=-0.078), BOC9-COC4 (MI=12.482; EC=-0.206), BOD8-ICG1 (MI=10.655; EC=-0.071), and BOC8-ICG3 (MI=9.768; EC=-0.068). Thus model re-specification was directed to the fifth largest pair that shared significant error variance. That was IC9-ICG1 (MI=9.461; EC=0.054). ICG1 also shared SR with BOD8 (=-2.756), IC4 (=3.054), IC5 (=3.759), and AC7 (=4.150). All SR values were higher than the benchmark of Hair et al. (1998). Since ICG1 had a lower loading than IC9 (0.833 and 0.972 respectively), ICG1 was dropped.
Iteration 8	Three pairs of indicators shared the largest significant error variance, but with negative ECs. These were: BOD7-ICG3 (MI=16.410; EC=-0.076), BOC8-ICG3 (MI=13.559; EC=-0.082), and BOC9-COC4 (MI=12.563; EC=-0.206). As the fourth largest pair of indicators that shared the largest significant error variance (MI=8.007) with positive EC, the pair of IC5-BOD17 was subject to model re-specification. BOD17 also shared SR with IC4 (=4.899), and ICG3 (=4.710). These two SR values were above the ±2.58 threshold of Hair et al. (1998). As the loading of BOD17 was lower than IC5 (0.812 and 0.972 respectively), BOD17 was dropped.
Iteration 9	There were four pairs of indicators which shared the largest significant error variance, but with negative ECs: BOC8-ICG3 ((MI=13.552; EC=-0.082), BOD7-ICG3 (MI=12.995; EC=-0.069), BOC9-COC4 (MI=12.750; EC=-0.208), and BOD8-ICG2 (MI=9.411; EC=-0.063). Thus model re-specification was directed to the fifth largest pair that shared significant error variance. That was IC6-COC5 (MI=7.557; EC=0.134). Since IC6 had a lower loading than COC5 (0.890 and 0.917 respectively), IC6 was dropped.

Iteration 10	Four pairs of indicators shared the largest significant error variance, but with negative ECs. These were: BOC8-ICG3 (MI=13.301; EC=-0.081), BOD7-ICG3 (MI=13.213; EC=-0.058), BOC9-COC4 (MI=12.899; EC=-0.209), and BOD8-ICG2 (MI=9.702; EC=-0.064). With the fifth largest significant error variance was the pair of ICG3-COC4 (MI=6.513), and with positive EC (0.079), model re-specification was directed to this pair. COC4 also shared SR with BOC8 (=-3.024), BOC9 (=-3.352), IC4 (=-4.051), IC5 (=-4.801), AC7 (=-4.059), and ICG3 (=3.321). As COC4 had a lower loading than ICG3 (0.852 and 0.904 respectively), COC4 was dropped.
Iteration 11	There were three pairs of indicators which shared the largest significant error variance, but with negative ECs: BOD7-ICG3 (MI=13.132; EC=-0.069), BOC8-ICG3 ((MI=12.663; EC=-0.079), and BOD8-ICG2 (MI=9.749; EC=-0.064). Thus model re-specification was directed to the fourth largest pair that shared significant error variance. That was BOC8-ICG2 (MI=6.124; EC=0.053). Dropping one of these two items would have contributed to the condition of empirical underindentification. Consequently, these parameters were set to free. One substantial consideration was that the fulfilment of duties of ICG in creating policies to increase the operational efficiency and effectiveness of the company is operationalised by BOC that ensures that BOD protects the interests of shareholders.
Iteration 12	Two pairs of indicators shared the largest significant error variance, but with negative ECs. These were: BOD7-ICG3 (MI=13.114; EC=-0.069), and BOD8-ICG2 (MI=9.206; EC=-0.062). As the third largest pair of indicators that shared the largest significant error variance (MI=6.141) with positive EC, the pair of AC6-BOD7 was subject to model re-specification. Dropping one of these two items would have contributed to the condition of empirical underindentification. Accordingly, these parameters were set to free. From a substantive perspective, fulfilling the duties of an AC of empowering internal audit facilitates BOD in creating ethical environment.
Iteration 13	There were two pairs of indicators which shared the largest significant error variance, but with negative ECs: BOD7-ICG3 (MI=12.847; EC=-0.068), and BOCD-ICG2 ((MI=9.728; EC=-0.064). With the third largest significant error variance was the pair of BOC-IC5 (MI=5.549), and with positive EC (0.043), model re-specification was directed to this pair. From a substantive viewpoint, the fulfilment of duties of IC in ensuring that the company establishes audit system facilitates BOC in ensuring that BOD protects the interests of shareholders. Based on this argument, these parameters were set free.
Iteration 14	Two pairs of indicators shared the largest significant error variance, but with negative ECs. These were: BOD7-ICG3 (MI=12.751; EC=-0.067), and BOD8-ICG2 (MI=9.834; EC=-0.064). As the third largest pair of indicators that shared the largest significant error variance (MI=6.141) with positive EC, the pair of IC4-BOD7 was subject to model re-specification. Considering BOD7 had a lower loading than IC4 (0.926 and 0.984 respectively), BOD7 was dropped. The result showed the final model

From iteration 14 or the final model, it has been shown that most of the fit indices satisfied the benchmark applied to this study. The ratio of S-Bχ^2/df was within the acceptable range of 1-2 (=61.63/45=1.370); the *p*-value was equal to the benchmark (=0.050); RMSEA was satisfactory (=0.027); GFI was acceptable (=0.948); AGFI was good (=0.909), and CFI's value was excellent (=0.999). The RMR score was not as good as the recommended benchmark of less than or equal to .05. However, since the RMSEA index was excellent, and RMSEA is superior to RMR in terms of its characteristic of being less affected by sample size (Fan, Thompson, and Wang 1999), this study considered that goodness-of-fit indices were satisfactory. Further, Byrne (1998) claimed that interpreting RMR is difficult since the residual values derived from the fitting of the variance-covariance matrix for the hypothesised model to those of the matrix of the sample data are relative to the sizes of the observed variance and covariance. The remaining indicators or observed variables of the second-order construct of Internal Corporate Governance are shown in figure 7.4.

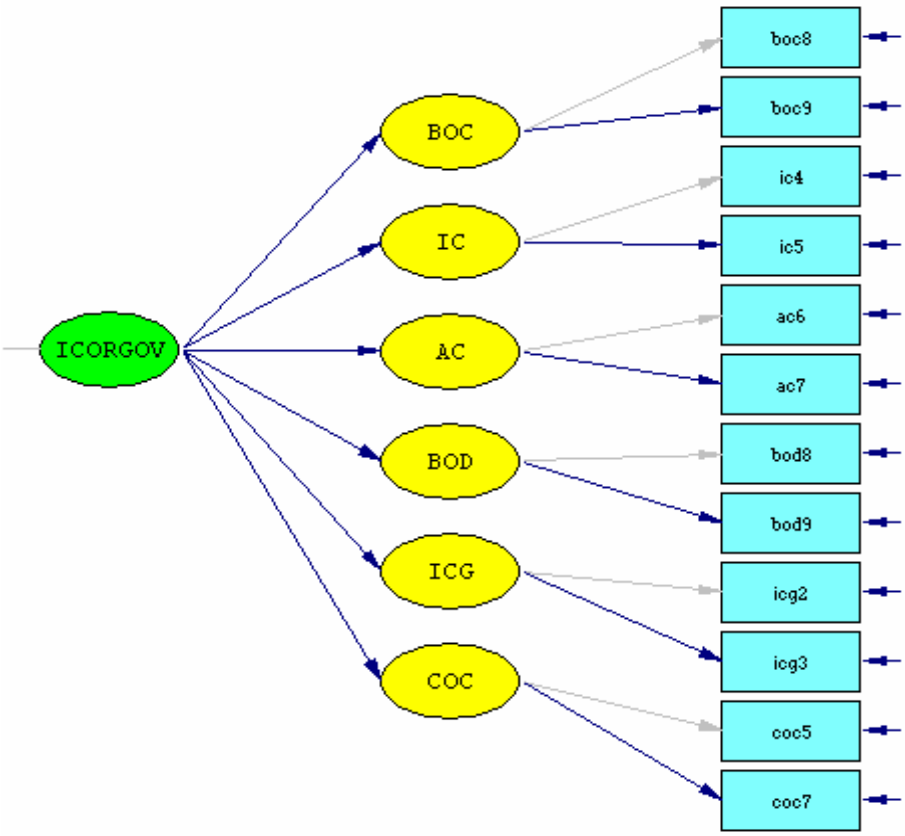

Table 7.4: The Remaining Indicators for the Second-Order Construct of Internal Corporate Governance

7.3.3 Assessment of the Structural Model

Following the comprehensive assessment of measurement part of the SEM (Anderson and Gerbing 1988; Holmes-Smith 2001; Jöreskog and Sörbom 2006), the next step was to assess the structural part of SEM. In the previous section (measurement), the relationship of observed variables and their underlying constructs was measured. In this section, the structural part permits relationships between constructs to be examined. It is also possible, and often desirable to include observed variables as part of structural model.

As stated by Gefen, Straub and Boudreau, the objective of covariance-based SEM is:

> to show that the null hypotheses – the assumed research model with all its paths – is *insignificant*, meaning that the complete set of paths as specified in the model that is being analysed is plausible, given the sample data. Moreover, its goodness of fit tests, such as χ^2 test the restrictions implied by a model. In other words, the objective of covariance-based SEM is to show that the operationalization of the theory being examined is corroborated and not disconfirmed by the data. (2000 p. 24-25)

This can be met with, for example, *insignificant* χ^2 with *p*-value above .05, GFI above .90, among many other criteria that are discussed in detail in the section above addressing the evaluation of overall model fit. To improve the structural relation between constructs or latent variables, modification or re-specifications are again carried out. That is, a modification index and its associated expected change is examined. In this part, depending upon the remaining number of parameters, the study combines the recommendation of Holmes-Smith (2001), namely freeing or deleting parameters. Of the remaining observed variables and constructs there were 10 constructs with two observed variables. Deleting one of the observed variables of these 10 constructs would have contributed to the condition of empirical underindentification. As recommended by Jöreskog and Sörbom (1989; 1996), Sethi and King (1994) and LISREL 8.8 (2006), only one parameter was changed at every step. These processes were to be stopped when there was no more statistical evidence and theoretical justification to suggest further refining of the structural model. That is, statistical model fit was achieved (Jöreskog and Sörbom 2006). Compressing the full model into one page, the path structure of the model is shown in the figure 7.5 below. The figure shows the relationship between dependent and independent constructs. The rectangle represents the indicator or observed variables and the ellipses or circles indicate the constructs or unobserved variables. A single-headed

arrow indicates the effect of first-order construct and its indicators upon second-order construct. It also indicates the effect of an independent construct on a dependent construct (Holmes-Smith 2001).

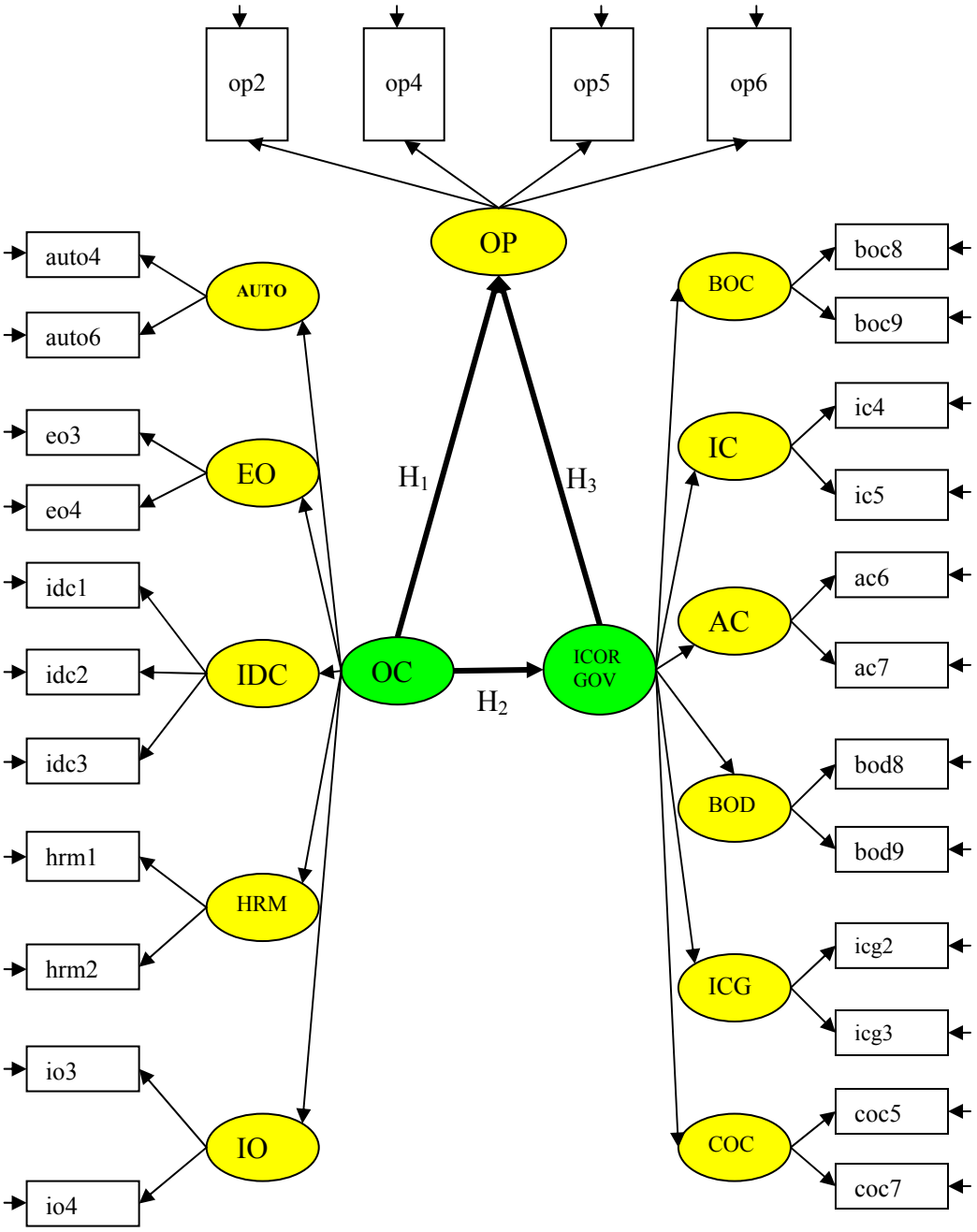

Figure 7.5: The Full Research Model

Three hypotheses developed in chapter 3 will be tested in the structural part. The relationship between dependent constructs and an independent construct is shown in the LISREL path diagram. The paths between dependent constructs and independent construct are measured by the Gamma (γ) coefficient, and the path between dependents construct is measured by the Beta (β) coefficient. Considering the study employs second-order constructs in measuring organisational culture and internal corporate governance, and first-order construct of organisational performance, there are two Gamma (γ) coefficients – the path between the Organisational Culture construct and Organisational Performance, and the path between Organisational Culture and Internal Corporate Governance, and one Beta (β) coefficient – the path between Internal Corporate Governance and Organisational Performance — in structural path.

In assessing the structural paths the *t*-value was applied. The path was to be considered statistically significant if the *t*-value was greater than ± 1.96 at a 5% significance level (greater than ± 1.645 at a 10% significance level and ± 2.575 at a 1% significance level).

7.3.3.1 Results of Structural Model Fit

Following the second-order confirmatory factor analysis of the previous stage, the full research model relating dependent and independent constructs was entered in and run by LISREL software. The result, a set of statistics which is shown in table 7.10 column 1 (Initial Model), was examined so that each construct was psychometrically sound.

Table 7.10: Model Re-specification of Full Model

Overall Fit Indices	**Initial Model**	**Iteration 1**	**Iteration 2**	**Iteration 3**
S-Bχ^2 (df)	389.47 (304)	379.65 (303)	321.89 (278)	316.08 (277)
***p*-value**	0.000	0.002	0.036	0.053
RMSEA	0.024	0.023	0.018	0.017
RMR	0.134	0.134	0.122	0.122
GFI	0.884	0.886	0.898	0.900
AGFI	0.856	0.858	0.872	0.873
CFI	0.997	0.997	0.998	0.999

Iteration 1	The first pair of indicators shared the highest significant error variance, but with negative EC. This was EO3-BOC9 (MI=23.674; EC=-0.233). With the second largest significant error variance was the pair of EO3-BOC8 (MI=20.570), and with positive EC (0.122), model re-specification was directed to this pair. Instead of dropping one of the items, freeing the pair of items was selected in this iteration. This was because dropping strategy would have contributed to the condition of empirical underindentification. From a substantive perspective, it would seem reasonable that having BOC who ensures that BOD protects the interests of stakeholders would assist members of an organisation in canvassing new customers. This is because their effort to investigate new customers -– as part of stakeholders – could be guided by BOC direction in protecting the stakeholders' interest. Therefore, freeing these parameters was justified.
Iteration 2	Two pairs of indicators shared the largest significant error variance, but with negative ECs. These were: COC5-OP6 (MI=16.523; EC=-0.087), and HRM1-IC5 (MI=15.372; EC=-0.077). As the third largest pair of indicators that shared the largest significant error variance (MI=13.085) with positive EC (0.226), the pair of IDC3-BOC9 was subject to model re-specification. IDC3 also shared SR with HRM2 (=5.436), BOC8 (=4.559), BOC9 (=9.431), IC4 (=3.276), AC6 (=4.225), BOD8 (=4.276), BOD9 (=15.244), COC5 (=9.2050, and COC7 (=4.325). As the loading of IDC3 was lower than BOC9 (0.825 and 0.958 respectively), IDC3 was dropped.
Iteration 3	There were two pairs of indicators which shared the largest significant error variance, but with negative ECs: COC5-OP6 (MI=16.592; EC=-0.087), and HRM1-IC5 (MI=15.690, EC=-0.078). With the third largest significant error variance was the pair of HRM2-ICG2 (MI=12.885), and with positive EC (0.078), model re-specification was directed to this pair. Instead of dropping one of the items, freeing the pair of items was selected in this iteration. This was because dropping strategy would have contributed to the condition of empirical underindentification. From a substantive point of view, having practices that allow employee obtain useful information about their functioning would be considered as increasing the operational efficiency and effectiveness of the company – policy that created by ICG. As a result, freeing these parameters was substantiated. The result showed the final model.

This process is repeated up to the point where researcher believes that there is no more room for improving the fit of the model[24]. The initial model revealed the results of the structural relationship of the constructs under examination; these are shown in table 7.11. First, the structural path of Organisational Culture to

[24] Byrne (1998, p. 251) recommended that 'Although there are no firm rules or regulations to guide this decision, the researcher's best yardsticks include (a) a thorough knowledge of the substantive theory, (b) an adequate assessment of statistical criteria based on information pooled from various indices of fit, and (c) a watchful eye on parsimony.'

Organisational Performance with a standardised structural coefficient of 0.009 was not significant at the 5% significance level. Second, having a standardised structural coefficient of 0.879, the structural path of Organisational Culture to Internal Corporate Governance was significant at the 5% significance level. Third, the structural path of Internal Corporate Governance to Organisational Performance, with a standardised structural coefficient of 0.080, was not significant at the 5% significance level. From the overall fit indices in table 7.10 and table 7.11, it was observed that model optimisation or re-specification was needed before evaluation of the structural model could be finalised.

Table 7.11: Results of Hypotheses Testing based on the Hypothesised Model

Structural Path	Hypothesis	Standardised Structural Coefficient (*t*-values)	Significance of Hypotheses (5% Level)
Organisational Culture to Organisational Performance	H_1	0.009 (0.058)	No
Organisational Culture to Internal Corporate Governance	H_2	0.879 (9.275)	Yes
Internal Corporate Governance to Organisational Performance	H_3	0.080 (0.533)	No

7.3.3.2 Model Re-specification

It must be noted that the research model developed for this study consisted of two second-order constructs and one first-order construct within which three structural parts were hypothesised. In this regard, the model re-specification that was to be applied was intended to affect the modification index measure and associated expected change only. Deleting or fixing to zero the non-significant parameter was not chosen as this alternative would have resulted in deleting the hypothesis. In examining the modification index measure and associated expected change the following guidelines was followed. Start with the parameter that has the largest MI, and if the sign of the expected change of this largest MI is theoretically justifiable then the parameter can be set free or deleted to increase model fit. Subsequently, if it does not make sense to set the parameter free or to delete parameter then consider the second largest MI, and so forth. Any model modification should be reasonable and be supported by literature (Byrne 1998; Schumacker and Lomax 2004; Jöreskog 1993; Holmes-Smith 2001). The process of model re-specification is presented in the table 7.10.

The results of model re-specification revealed the structural paths of this study shown in table 7.12. First, the structural path of Organisational Culture to Organisational Performance with a standardised structural coefficient of 0.019 was not significant at the 5% significance level. Second, having a standardised structural coefficient of 0.874 the structural path of Organisational Culture to Internal Corporate Governance was significant at the 5% significance level. Third, the structural path of Internal Corporate Governance to Organisational Performance, with a standardised structural coefficient of 0.072 was not significant at the 5% significance level. Model re-specification resulted in the improvement of the standardised structural coefficient of the first path of the research model; however, this coefficient was not strong enough to make the structural path to significant.

Table 7.12: Assessment of Structural Model — Final Model

Structural Path	Hypothesis	Standardised Structural Coefficient (*t*-values)	Significance of Hypotheses (5% Level)
Organisational Culture to Organisational Performance	H_1	0.019 (0.126)	No
Organisational Culture to Internal Corporate Governance	H_2	0.874 (9.390)	Yes
Internal Corporate Governance to Organisational Performance	H_3	0.072 (0.503)	No

Summing up the final model, the goodness-of-fit indices are presented in table 7.13. From iteration 3, or the final model, it is shown that most of the fit indices satisfied the benchmark applied to this study. The ratio of S-Bχ^2/df was within the acceptable range of 1-2 (=316.08/277=1.141), the *p*-value was greater than the benchmark (=0.053), RMSEA was satisfactory (=0.017), GFI was good (=.900), and CFI's value was excellent (=0.999). In regard to RMR, its score was not as good as the recommended benchmark of less than or equal to .05. However, since the RMSEA index was excellent, and RMSEA is superior to RMR in terms of its characteristic of being least affected by sample size (Fan, Thompson, and Wang 1999), then this study considered that goodness-of-fit indices were satisfactory. Further, Byrne (1998) claimed that interpreting RMR is difficult since the residual values derived from the fitting of the variance-covariance matrix for the hypothesised model to those of the matrix of sample data are relative to the sizes of the observed variance and covariance. In regard to AGFI, it is acknowledged that this index is less

than the restrictive threshold of .90, but it exceeded the threshold of .80 (Gefen, Straub, and Boudreau 2000). AGFI in the .80 to .89 range are believed to represent a reasonable fit (Doll, Xia, and Torkzadeh 1994). Moreover, as Kotha, Vadlamani and Nair (1997) argue, such an AGFI index is still appropriate as long as other indices perform well, as was the case in this study; then, it could be concluded that overall fit indices do well.

Table 7.13: Goodness-of-Fit of Final Model

Goodness-of-Fit Index	**Value**
S-Bχ^2 (df)	316.08 (277)
***p*-value**	0.053
RMSEA	0.017
RMR	0.122
GFI	0.900
AGFI	0.873
CFI	0.999

The results of squared multiple correlations (R^2) are reported in the table 7.14. The value of R^2 for the independent constructs shows the degree of reliability of measurement indicators in explaining the underlying constructs – it ranged from 0.235 to 0.791 for the AUTO construct and the AC construct respectively. The value of R^2 for the dependent constructs (ICORGOV and OP) represents the degree of variance explained by the research model. In this study the model explained 76.4% of the variance in ICORGOV, and only 0.8% of the variance in OP.

Table 7.14: Squared Multiple Correlations (R^2) of the Final Model

Construct	**R^2**
AUTO	0.235
EO	0.521
IDC	0.570
HRM	0.697
IO	0.521
BOC	0.609
IC	0.565
AC	0.791
BOD	0.740
ICG	0.533
COC	0.685
ICORGOV	0.764
OP	0.008

7.4 Hypothesis Testing

Having analysed the measurement and structural part of structural equation modelling, it was possible to evaluate the hypotheses developed for this study. A hypothesis is assessed through examining the *t*-values. There were mixed results on the proposed relationship, as shown in table 7.12.

7.4.1 Hypothesis 1

In Chapter 3 it was hypothesised that there was a positive and significant relationship between Organisational Culture and Organisational Performance. The present study, with a *t*-value of 0.126, provides evidence that the relationship of OC to OP is not significant — although the relationship is in right direction. This path indicates that OC has little positive impact on OP.

7.4.2 Hypothesis 2

Hypothesis 2 stated that there was a positive and significant relationship between Organisational Culture and Internal Corporate Governance. Having a *t*-value of 9.390, the present research confirms the relationship of OC to ICORGOV. This path signifies that OC has a significant positive impact on ICORGOV.

7.4.3 Hypothesis 3

Hypothesis 3 stated that there was a positive and significant relationship between ICORGOV to OP. Looking at the *t*-value of 0.503, the present study presents evidence that the relationship of ICORGOV to OP is not significant, albeit in the right direction. This path denotes that ICORGOV has little impact on OP.

7.5 Summary

This chapter has described the analysis of the data using Structural Equation Modelling – LISREL software. In the first part of this chapter, discussion relating to estimation method, data examination, and sample size was presented.

This chapter has also presented the model assessment, including assessment of its measurement properties, confirmatory factor analysis of the second-order constructs of organisational culture and internal corporate governance, and assessment of the structural model. In doing so, several goodness-of-fit benchmarks

were applied, including Satorra-Bentler Chi-Square, degree of freedom, *p*-value, RMSEA, RMR, GFI, AGFI, and CFI. Overall, it was concluded that most of fit indices satisfied the threshold applied.

In the third part of this chapter, the testing of the hypotheses was presented. This suggested that although the relationships of organisational culture and organisational performance, and internal corporate governance and organisational performance, were in the right direction, these relationships were not significant. The hypothesis proposed about the relationship between organisational culture and internal corporate governance was in the right direction and significantly confirmed by the data collected.

Chapter 8: Results, Interpretation and Discussion

8.1 Overview

Chapter 8 presents the interpretation and analysis of the results of the Structural Equation Modelling (SEM) described in chapter 7. The research model is analysed by examining validity and reliability of constructs, the direct and indirect effect, and total effect of organisational culture and internal corporate governance on organisational performance. A detailed discussion related to the three hypotheses proposed in chapter 3 is presented, followed by a general summary and a description of the research implications.

8.2 Model Analysis

8.2.1 Validity and Reliability of Constructs

In regard to the organisational culture construct, the study showed that the measurement part of this construct is reliable and valid (see section 7.3). Its first-order construct was dimensional (Kotha, Vadlamani, and Nair 1997), and its second-order construct satisfied the benchmark applied in this study – as indicated by the results of its confirmatory factor analysis. Similarly, the results of the measurement part of internal corporate governance satisfied the threshold applied in this research – unidimensionality of the first-order construct, and confirmatory factor analysis of the second-order construct (see section 7.1). The importance of developing standardised instruments for measuring the organisational culture construct has been stressed as 'there is a strong need for speculating less and measuring more' (Hofstede 1986, p. 256). The requirement of having a valid measurement of internal corporate governance is no less important, as this construct was developed to overcome 'empirical dogmatism' in the form of negligence of alternative approaches of measurement in the field of corporate governance (Daily, Dalton, and Cannella Jr 2003). Further, the confirmatory factor analysis applied to this construct provided a rigorous and systematic test of the factor structure of this domain (Jöreskog and Sörbom 1989). In regard to the organisational performance construct, the measurement part indicated that the requirements of validity and reliability all were fulfilled. Therefore, the results enhance the utility of organisational culture, internal corporate governance and organisational performance instruments by presenting

confirmation that these constructs explain and measure the construct of organisational culture, internal corporate governance and organisational performance.

8.2.2 Direct, Indirect and Total Effect

The total effect was examined by summing the direct and indirect effect among the constructs in the research model. Direct effect between two constructs occurs when a single-directed line or a one-way arrow connects them, while indirect effect takes place when no single straight line or arrow directly joins them; that is, when the first latent variable may be reached from the second latent variable through the path of one or more other latent variables (Schumacker and Lomax 1996). In measuring direct effect LISREL utilises the structural coefficient, while in counting indirect effects it uses the product of the structure coefficients involved (Jöreskog and Sörbom 1996; Schumacker and Lomax 1996). The direct, indirect, and total effects of the independent construct on the dependent construct in this study were analysed from two perspectives, namely the predication of Internal Corporate Governance and the predication of Organisational Culture. These were based on the final model (see figure 7.5 and table 7.10) and are presented in the following sections.

8.2.2.1 Internal Corporate Governance

The result of the effect of organisational culture on internal corporate governance is reported in table 8.1. The effect was to be considered statistically significant if the *t*-value was greater than ± 1.96 at a 5% significance level (greater than ± 1.645 at a 10% significance level and ± 2.575 at a 1% significance level) (Hair et al. 1998). This table shows that organisational culture had a strong direct effect/total effect – shown by the structural coefficient – on internal corporate governance (γ=0.874 with P<0.001 and *t*-values=9.390). The structural coefficient of the relationship between organisational culture and internal corporate governance is symbolised by γ in SEM.

Table 8.1: Prediction of Internal Corporate Governance

Independent Construct	Dependent Construct: Internal Corporate Governance			Tested Hypothesis (Significant?)
	Direct Effect	Indirect Effect	Total Effect	
Organisational Culture	0.874***	-	0.874***	Yes

Note:*** P<0.001 with *t*-values of 9.390

8.2.2.2 Organisational Performance

The results of the effect of organisational culture and internal corporate governance on organisational performance are shown in table 8.2. The effect was to be considered statistically significant if the *t*-value was greater than ± 1.96 at a 5% significance level (greater than ± 1.645 at a 10% significance level and ± 2.575 at a 1% significance level) (Hair et al. 1998). This table shows that organisational culture had a weak direct effect, indirect effect, and total effect on organisational performance (γ=0.019, γ=0.063, and γ=0.082, with P>0.10, P>0.10, and P>0.10, respectively). The similar results are shown by *t*-values (*t*-values=0.126, *t*-values=0.505, and *t*-values=1.313, respectively). Table 8.2 also shows that internal corporate governance had a weak direct effect/total effect on organisational performance (β=0.072 with P<0.10 and *t*-values=0.503). The structural coefficient of the relationship between organisational culture and organisational performance is symbolised by γ, while the structural coefficient of the relationship between internal corporate governance and organisational performance is symbolised with β in SEM. The γ represents the relationship between independent constructs, while the β signifies the relationship between dependent constructs.

Table 8.2: Prediction of Organisational Performance

Independent Construct	Dependent Construct: Organisational Performance			Tested Hypothesis (Significant?)
	Direct Effect	Indirect Effect	Total Effect	
Organisational Culture	$0.019^{\#}$	$0.063^{\#\#}$	$0.082^{\#\#\#}$	No
Internal Corporate Governance	$0.072^{\$}$	-	$0.072^{\$}$	No

Note: $^{\#}$ P>0.10 with *t*-values of 0.126, $^{\#\#}$ P>0.10 with *t*-values of .505, $^{\#\#\#}$ P>0.10 with *t*-values of 1.313, $^{\$}$ P>0.10 with *t*-values of 0.503

8.3 Interpretation and Discussion of the Results of Data Analysis

Evidence from chapter 7 showed that overall model fit was satisfactory. However, not all proposed hypotheses were supported by the data. Hypothesis testing was performed by examining the *t*-values and standardised structural coefficients (table 7.12). It was revealed that only H_2 was significant. In regard to the remaining hypotheses, there was not statistical evidence to conclude the significance of H_1 and H_3.

8.3.1 Hypothesis 1

The lack of evidence to support H_1 indicated that organisational culture is not a significant determinant of organisational performance. This is not consistent with the findings of previous studies, such as Denison and Mishra (1995), Peters and Waterman (1982), Petty et al. (1995), and Wilderom and Van den Berg (2000; 1998). However, the tenuous relationship between organisational culture and organisational performance was also documented in the study of Lewis (1994), Lim (1995), and Chan, Shaffer and Snape (2004), among many others. In particular, Arogyaswamy and Byles (1987) have claimed that culture is not always crucial in determining performance.

Given the pace of change confronting companies as a result of the Indonesian monetary crises, reformation, privatisation and adjustment to new regulatory regime, it appears the current organisational culture practice in Indonesia is unable to help companies to respond appropriately to those challenges and perform better. Organisational culture needs not only to be maintained (Redmon and Mason 2001), but also directed to enable firms to deliver a better performance. Directing organisational culture is particularly important if the environment surrounding companies is a dynamic one that demands organisational culture's response to ensure not only organisations' survival but also an organisations' performance. In directing organisational culture to performance, goals and plans of the organisation need to be clearly understood by its members.

Another possible reason for the insignificant relationship of these constructs is time. That is, the impact of organisational culture on organisational performance may materialise later in time. This would be in accordance with the studies of Denison (1984; 1990) which show the time-dependence of the effects of

organisational culture on performance. Here, investment in organisational culture, as organisational practices which are visible and audible, requires longer to be expressed in better organisational performance. At the beginning, culture requires investment, and then at a later stage culture produces returns as no further improvements are needed in the dimensions of organisational performance construct. A similar conclusion was made by Lim (1995) who noted that there is little indication to conclude that there is causal relationship between culture and the short-term performance of organisations.

In addition, the inclusive sampling used in this study can nullify the effect, thereby, contributing to the non-significance of the model. Peters and Waterman's (1982) study was also wide-ranging, but they deliberately chose only the excellent (high performance) companies, and then studied their cultural traits. This study did not make any attempt to follow their approach, and thus treated the respondents from 'excellent' and 'non-excellent' companies equally.

There was also the possibility that the non-significant relationship was due to the tenure of respondents. That is, the new managers who attended the educational courses and/or training programs may not have had enough exposure in order to gauge their organisation's culture and performance. However, looking at the demographic characteristics of the sample – only 2.0 per cent of respondents had had tenure less than 1 year – this possibility is unlikely[25].

8.3.2 Hypothesis 2

The strong evidence in support of H_2 suggests that organisational culture is a determinant of internal corporate governance. This is in accordance with the studies of Semenov (2000) and Licht (2001). It must be noted, however, that these aforementioned studies were carried out using national culture – for the culture variable – and secondary/archival data – for internal corporate governance variables. To the best of the researcher's knowledge, no empirical studies test the relationship of organisational culture – defined as organisational practices – and internal corporate governance – defined as the fulfilment of duties of companies' governance structures. In addition, almost every study of the culture–governance relationship has been carried out in developed countries.

[25] Similar result was obtained using reduced data – 396 respondents with tenure more than 5 years.

Based on the above significant relationship, it is possible to interpret that organisational culture is a pillar of the fulfilment of duties of companies' governance structures. That is to say that having organisational practices in place in terms of empowerment (*autonomy*), being outward looking (*external orientation*), coordination of activities (*interdepartmental coordination*), objective assessment of human resource practice (*human resource management*), and the basic nature of human beings to serve others well (*improvement orientation*) is a requirement for company officers – those who enact internal corporate governance – to accomplish the duties assigned to them. It is also possible to interpret that organisational culture provides members of an organisation, including those who comprise the companies' governance structures or organs, with guidance in fulfilling role expectations, giving meaning to daily lives and behaviour (Hofstede et al. 1990; Saffold III 1988; Schein 1991). This is especially important when companies are shifting strategic direction – including the establishment of governance structures in compliance to regulation, and the consequences associated with this – where the impact of organisational culture is foremost (Schwartz and Davis 1981).

8.3.3 Hypothesis 3

Contrary to the findings of other corporate governance–organisational performance studies (Florackis 2005; Himmelberg, Hubbard, and Palia 1999; Hoskisson, Harrison, and Dubofsky 1991; Thomsen and Pedersen 2000), there was no empirical finding in this research to suggest that internal corporate governance is significantly associated with organisational performance (H_3). However, this research is not alone in providing evidence of a non-significant relationship between corporate governance and organisational performance. For example, in their study of Australian listed companies, Lawrence and Stapledon (1999) revealed no evidence of a significant relationship. Similarly, studies carried out in Singapore (Mak and Li 2001) and the UK (Faccio and Lasfer 1999) have produced the same results. Two studies performed by Bhagat and Black (1999; 2002) using US data have also revealed the non-correlation between internal corporate governance and firm performance.

One possible interpretation is that in Indonesian context, governance compliance is superficial, with governance structures established but little activity associated with these structures. What companies need is the substance of these corporate structures – the fulfilment of duties. In this regard, although Daniri (2005)

reported that the number of companies that has established *Independent Commissioners* and *Audit Committee* is nearly 100 per cent of listed companies in the Jakarta Stock Exchange (JSX), the Audit Board of the Republic of Indonesia claimed that their duties are rarely executed and proffered this as evidence of very limited governance — otherwise company failures would have been solved (SCTV 2007; BPK 2007). Thus the *raison d'etre* of governance structures is questioned – are they just for the sake of compliance with regulations or to better govern companies and improve performance? In particular in the absence of rigorous evaluation of compliance program effectiveness, the speculation that they are more concerned with conformance than performance is unavoidable (Parker 2007). Tricker's (1994) model of corporate governance incorporates both compliance and performance roles. In Indonesia context, current orientation is focused on compliance roles. Tricker (1994) proposes that better organisational performance is linked to skills and strategy making – the roles that belong to performance roles of the governance structure. The performance roles are expected to be fulfilled once the compliance roles are undertaken. It is possible to speculate that internal-institution building – the establishment of companies' corporate governance structures or corporate organs – needs time to deliver duties assigned to them. Initially, the appointment of companies' governance structures or corporate organs demands costs and is compliance focused, but then at a later stage their fulfilment of duties improves the companies' position, including improvement in organisational performance dimensions. In this regard, Leblanc and Gillies (2005) admit that there is time-lag between when governance structures act and when company performance responds.

In terms of regulations, in Indonesian *Company Law 1995*, there is neither a limitation nor prohibition of individuals from holding multiple board positions simultaneously. This may also contribute to underperforming firms. That is, the internal corporate governance mechanisms within one company are rarely fully fulfilled if the members of the *Board of Commissioners* and *Directors* also serve the same position in other companies. This is especially the case for the directors, as directors are normally full-time employees of the company. In regard to *Board of Commissioners,* the workload is increasing for board members, making more likely that individuals who serve many boards simply won't have enough time to perform effectively. They, possibly, will gain valuable experience by becoming member of board of other organisations, but a law of diminishing returns might apply, such that

being on a number of outside boards could easily have an overall negative impact as the time demands outweigh the learning opportunities (Lawler III and Finegold 2005).

In regard to *Independent Commisioners*, there is a possibility that these appointed *Commissioners* are ignorant of the operation of the company. Their ignorance may result from the fact that their appointment was not based on expertise, but rather on other considerations, such as politics or government connections. The independence of *Independent Commissioners* in Indonesian companies was also questioned by Tabalujan (2002). The Code for Good Corporate Governance stipulates that at least 20 per cent of commissioners must be independent of the directors and controlling shareholders and must hold no interest which may impair their ability to perform duties impartially. However, as the adoption of this code is not yet mandatory, the query of Tabalujan may be justified. Further, while a commissioner may be viewed and classified as independent, he or she may not behave independently (Leblanc and Gillies 2005) as independence may be more a 'state of mind' (Leblanc 2004) than a definable function.

Further, Lawler III and Finegold (2005) revealed that the overlapping nature and long tenure of *board of commissioners* contribute to the non-independence of the board. They stated that when the same people sit on each others' boards, they may lose objectivity and independence; and when people remain in a board for a long time, they can become too close to senior management and lose their objectivity. In essence, they may become too comfortable with the status quo.

Another possible explanantion of a weak relationship between internal corporate governance and organisational performance constructs is that the various roles or duties of the *board of commissioners* are in conflict. In this regard, Herman (1981) and Brennan (2006) claimed that in exercising the roles of monitoring performance and controlling operations of the firm, the board could help company perform better, but these could also impose constraints on managers' freedom to generate shareholder value.

8.4 Result Summary and Implications

The following findings resulted from the study of the impact of organisational culture and internal corporate governance on organisational performance in Indonesian companies:

a. Organisational culture defined as organisational practices has a positive but insignificant relationship with organisational performance.
b. Organisational culture defined as organisational practices has a positive and significant relationship with internal corporate governance.
c. Internal corporate governance defined as the fulfilment of the duties of companies' governance structures or organs, and the reinforcement of codes of conduct, has a positive but insignificant relationship with organisational performance.

This research has produced a valid and reliable measure of organisational culture, internal corporate governance and organisation performance. Researchers can utilise these constructs with confidence. This is especially significant as internal corporate governance is a new construct in the field of corporate governance studies.

The result of the hypotheses testing suggests that successful fulfilment of duties of internal corporate governance structures directly links with the existence of organisational culture. Of particular importance in the findings is that the existence of organisational culture and internal corporate governance can not in and of themselves produces significant performance improvements. Accordingly, organisations need to not only establish the organisational practices but also unite and direct these practices toward better organisational performance. Organisations facing substantial environmental changes need direction to soften the force of challenges and to help them make sense of how best to confront these changes.

Organisations also need to recognise that the form of internal corporate governance – as shown by the establishment of governance structures – is not enough to increase organisational performance. More important is the accomplishment of the duties assigned to these governance structures. If better organisational performance is to take place, adoption of the regulations to have internal corporate governance in place should be accompanied by the performance of duties by those selected to enact the governance measures. For example, do the existence of companies' boards of

commissioners and independent commissioners merely act as ‘rubber stamps’ of boards of directors’ decisions? Is it true that the independent commissioners are making decisions independently, and for the benefit of companies’ performance? Is it true the boards of commissioners are supervising the boards of directors effectively, and for the benefit of general stockholders and stakeholders? Similar questions can be raised and directed to other governance structures or organs, such as audit committees, internal control groups, boards of directors, and codes of conduct. Similar questions have been raised in the latest report of the Audit Board of the Republic of Indonesia (see section 8.2.3), among many other similar reports.

Chapter 9: Conclusions and Future Directions

9.1 Summary of Research

The research examined firm managers' and executives' perception of the impact of organisational culture and internal corporate governance on organisational performance. The research – carried out in Indonesia – was motivated by the slow progress in improving organisational performance following the economic crisis in this country from 1997 to 1998.

Instead of relying on secondary data of annual reports of Indonesian companies which has been subject to debate in term of its validity and reliability, this study researched the perception of managers and executives via a questionnaire. A research model was developed that linked organisational culture, internal corporate governance and organisatonal performance. The constructs and research instruments were developed from the literature and interviews which were tested in a two stage pilot study. The final instruments were sent to 1,000 respondents in four cities – Jakarta, Bandung, Surabaya and Yogyakarta. Results were analysed in two stages, namely Factor Analysis and structural equation modelling (SEM).

The results of this research indicated that, in the Indonesian context, organisational culture is not a strong determinant of organisational performance. Organisational culture, however, is a statistically significant determinant of internal corporate governance. Lastly, internal corporate governance does not significantly impact on organisational performance.

9.2 Significance of the Research Results

The research tested three hypotheses. Hypothesis 1 examined the impact of organisational culture on organisational performance. It found that organisational culture is positively, though not statistically significant, linked to performance. Hypothesis 2 examined the impact of organisational culture on internal corporate governance. The result indicated that organisational culture does significantly impact on internal corporate governance. Hypothesis 3 examined the impact of internal corporate governance on organisational performance. It suggested that internal corporate governance is positively, though not statistically significant, related to organisational performance.

The lack of evidence to support H_1 indicated that in the Indonesian context current organisational culture was unable to help companies to respond appropriately to changes resulted from monetary crises, privatisation and adjustment to new regulatory regime and to perform better. Organisational culture needs to be directed to enable firms to deliver a better performance. In doing so, goals and plans of the organisation need to be clearly understood by its members.

The strong evidence to support to H_2 suggested that organisational culture was a significant determinant of the duties of companies's governance structures being fulfilled. In the context of companies shifting strategic direction such as the establishment of governance structures to comply with regulations and the consequences associated with them, organisational culture provides members of organisations with guidance in fulfilling their duties that are assigned to them.

The lack of evidence to support H_3 indicated that the orientation of internal corporate governance in the Indonesian context was not on performance roles, but rather on compliance roles. The establishment of internal corporate governance structures (conformance roles) should be accompanied by the performance roles by those selected to enact the governance measure if better organisational performance is to take place.

Another important contribution of this research was the development of valid and reliable second-order constructs of organisational culture and internal corporate governance. Firstly, in regard to the organisational culture construct, prior studies have loosely designed this as a first-order construct (Marcoulides and Heck 1993), and as a result have captured the complex phenomenon of culture only in a limited sense (Gordon and DiTomaso 1992; Kotter and Heskett 1992; O'Reilly and Chatman 1996). They have also specifically measured organisational culture in developed nations (Wilderom and Van den Berg 1998; Wilderom, Glunk, and Maslowski 2000; Van den Berg and Wilderom 2004). This study proposed a new second-order construct of organisational culture in Indonesia, which is statistically valid and reliable. Secondly, the second-order internal corporate governance construct was a new concept, developed from the literature review and adjusted to the research context through a series of interviews and pilot studies. None of the previous studies have developed this construct empirically and tested its significance.

Other significant contributions are related to the incorporation of organisational culture into the study of internal corporate governance, and the

inclusion of internal corporate governance in organisational performance research, both of which have not been investigated previously. Many studies of internal corporate governance have been dominated by secondary or archival data, while this study employed primary data which sought to overcome the absence of reliable, transparent, and accountable companies' reports (Nasution 2003). Further, prior corporate governance research tends to treat governance structures or company organs as a single variable (e.g. a board size, a representation of outside directors, an independency of governance structures, an establishment of committees) (Brennan 2006), while this study proposed six first-order constructs to capture the contributions of different governance structure within organisations.

The utilisation of structural equation modelling (SEM) analysis further contributes to the research in this field, as much previous research has been executed using the first generation of statistical tools, such as regression, path analysis, and factor analysis. SEM is able to test both measurement and the structural relationship simultaneously.

Finally, by referring to the indicators that were developed, organisations are provided with a checklist of the important variables in the research in this area. Further, providing there were valid and reliable measures of constructs, these indicators could help organisations that are planning to assess the practice of organisational culture, and to evaluate the implementation of duties assigned to companies' governance structures in their effort to improve organisational performance.

9.3 Limitations of the Research

No research study is without limitation. This study is no exception. The first limitation is related to the construct of internal corporate governance. The concept of internal corporate governance is relatively new to organisations in Indonesia. Media publications on this topic only began following the economic crises in 1997-1998. It is possible that respondents may not have had enough exposure in order to gauge this topic, even though they had had long tenure in their organisations (only 2.0 per cent of respondents had had tenure less than 1 year).

The second limitation is related to the cross-sectional nature of the study. This snapshot study suffers from potential development of the linkage of

organisational culture, internal corporate governance and organisational performance over time. For example the extent to which the concept of internal corporate governance has been embrace over time by managers can not be revealed. The similar concern is raised in regard to other constructs.

The third limitation is related to potential self-report, due to the use of single source respondents. Efforts were taken to remedy this biases by applying the procedural remedies proposed by Podsakoff et al. (2003).

The fourth limitation is related to the narrow demographic scope of the study. Indonesia is a developing country which practiced different organisational culture and applied different system of corporate governance compared to the rest of the world. The results of the study may not be representative of the broader developing countries in the world.

9.4 Future Research Direction

In pursuing an answer to the impact of organisational culture and internal corporate governance on organisational performance, the study developed a model and instruments to measure the constructs utilised in this research. In the future, research may look at the longitudinal view of the relationship of the constructs in the research model. Such an approach would provide fresh evidence about the above relationships, and also reveal the extent to which the new concept of internal corporate governance has been embraced by corporate officers over time. Further, this would also give Indonesian regulatory bodies evidence about their efforts to socialise the practice of good corporate governance among companies' managers and executives in Indonesia.

Another prospect of examining this research topic in the future lies in the context of comparing the successful and unsuccessful companies. The current research does not make any effort to differentiate the sample; thus it does not provide evidence of how internal corporate governance and organisational culture are practiced in good and poor-performing companies. Therefore, it would be possible to make a comparison between the two groups using a similar model in future research on this topic, to identify the best practice.

Finally, the results of this study were gathered from Indonesian companies. The validity of generalising the results to other non-western styles of corporate governance or to other developing countries is yet to be examined.

References:

Aguilera, R. V., and G. Jackson. 2003. The Cross-National Diversity of Corporate Governance: Dimensions and Determinants. *Academy of Management Review* 28 (3): 447-465.

Alchian, A. A., and H. Demsetz. 1972. Production, Information Costs, and Economic Organization. *The American Economic Review* 62 (5): 777-795.

Alreck, P. R., and R. B. Settle. 1995. *The Survey Research Handbook*. 2nd ed. Chicago: Irwin Professional Publishing.

Anderson, J. C., and D. W. Gerbing. 1988. Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin* 103 (3): 411-423.

Arogyaswamy, B., and C. M. Byles. 1987. Organizational Culture: Internal and External Fits. *Journal of Management* 13 (4): 647-659.

Ashkanasy, N. M., L. Broadfoot, and S. Falkus. 2000. Questionnaire Measures of Organizational Culture. In *Handbook of Organizational Culture and Climate*, eds. N. M. Ashkanasy, C. P. M. Wilderom and M. F. Peterson, 131-145. California: Sage Publications, Inc.

Astley, W. G., and A. H. Van de Ven. 1983. Central Perspectives and Debates in Organization Theory. *Administrative Science Quarterly* 28 (2): 245-273.

Atkinson, A. A., J. H. Waterhouse, and R. B. Wells. 1997. A Stakeholder Approach to Strategic Performance Measurement. *Sloan Management Review* 38 (3): 25-38.

Avolio, B. J., F. J. Yammarino, and B. M. Bass. 1991. Identifying Common Methods Variance with Data Collected from a Single Source: An Unresolved Sticky Issue. *Journal of Management* 17 (3): 571-587.

Bagozzi, R. P., Y. Yi, and S. Singh. 1991. On the Use of Structural Equation Models in Experimental Designs: Two Extensions. *International Journal of Research in Marketing* 8: 125-140.

Baird, M. 2000. *Transparency and Governance*. http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/INDONESIAEXTN/0,,contentMDK:20060327~menuPK:287094~pagePK:141137~piPK:141127~theSitePK:226309,00.html (accessed 27 September 2004).

Banks, E. 2004. *Corporate Governance: Financial Responsibility, Controls and Ethics*. New York: Palgrave Macmillan.

Barclay, D., C. Higgins, and R. Thompson. 1995. The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use as an Illustration. *Technology Studies* 2 (2): 285-324.

Barney, J. B. 1986. Organizational Culture: Can It Be a Source of Sustained Competitive Advantage? *Academy of Management Review* 11 (3): 656-665.

Bass, B.M., and B.J. Avolio. 1993. Transformational Leadership and Organizational Culture. *Public Administration Quarterly* 21 (2):112-117

Baysinger, B. D., and R. E. Hoskisson. 1990. The Composition of Board of Directors and Strategic Control: Effects on Corporate Strategy. *Academy of Management Journal* 15: 71-87.

Beaty, R. P., and E. J. Zajaz. 1994. Managerial Incentives, Monitoring, and Risk Bearing: A Study of Executive Compensation, Ownership, and Board

Structure in Initial Public Offerings. *Administrative Science Quarterly* 39 (2): 313-336.
Bebchuk, L. A., and M. J. Roe. 1999. A Theory of Path Dependence in Corporate Ownership and Governance. *Stanford Law Review* 52 (1): 127-170.
Bentler, P. M. 1990. Comparative Fit Indexes in Structural Models. *Psychological Bulletin* 107 (2): 238-246.
Bentler, P. M. 1995. *EQS Structural Equations Program Manual*. Encino, CA: Multivariate Software, Inc.
Bentler, P. M. 1996. Covariance Structure Analysis: Statistical Practice, Theory, and Directions. *Annual Reviews Psychology* 47: 563-592.
Bentler, P. M., and C.-P. Chou. 1987. Practical Issues in Structural Modeling. *Sociological Methods and Research* 16 (1): 78-117.
Berle, A. A. J., and G. C. Means. 1932. *The Modern Corporation and Private Property*. New York: Macmillan.
Bhagat, S., and B. Black. 1999. The Uncertain Relationship Between Board Composition and Firm Performance. *The Business Lawyer* 54 (3): 921-963.
Bhagat, S., and B. Black. 2002. The Non-Correlation between Board Independence and Long-Term Firm Performance. *Journal of Corporation Law* 27 (2):231-273.
Blair, M. M. 1995. *Ownership and Control: Rethinking Corporate Governance for the Twenty-First Century*. Washington: Brookings Institute.
Boomsma, A. 1983. On the robustness of LISREL (maximum likelihood estimation) against small sample size and nonnormality, University of Groningen-Netherlands (unpublished doctoral dissertation). In *Introduction to Structural Equation Modeling Using LISREL*, ed. P. Holmes-Smith. Perth: ACSPRI.
BPK. 2007. *Ikhtisar Hasil Pemeriksaan Semester II tahun 2006*. Jakarta: BPK. http://www.bpk.go.id/doc/hapsem/2006ii/ikhtisar/Bagian_I/Ringkasan_Eksekutif.pdf
Brennan, N. 2006. Boards of Directors and Firm Performance: Is There an Expectation Gap? *Corporate Governance An International Review* 14 (6):577-593.
Byrne, B. M. 1998. *Structural Equation Modeling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications, and Programming*. New Jersey: Lawrence Erlbaum Associates, Inc.
Byrne, B. M. 2006. *Structural Equation Modeling with EQS: Basic Concepts, Applications, and Programming*. 2nd ed. New Jersey: Lawrence Erlbaum Associates, Inc.
Cadbury Committee. 1992. *Report of the Committee on the Financial Aspects of Corporate Governance*. http://www.iia.org.uk/cms/IIA/uploads/2c9103-ea9f7e9fbe--7e3a/Cadbury.pdf (accessed 17 February 2005)
Calori, R., and P. Sarnin. 1991. Corporate Culture and Economic Performance: A French Study. *Organization Studies* 12 (1): 49-74.
Capulong, M. V., D. Edwards, D. Webb, and J. Zhuang. 2000. An Analytic Framework of Corporate Governance and Finance. In *Corporate Governance and Finance in East Asia: A Study of Indonesia, Republic of Korea, Malaysia, Philippines, and Thailand*, eds. M. V. Capulong, D. Edwards, D. Webb and J. ZhuangManila: Asian Development Bank.
Carmeli, A., and A. Tishler. 2004. The Relationship between Intangible Organizational Elements and Organizational Performance. *Strategic Management Journal* 25: 1257-1278.

Carroll, D. T. 1983. A Disappointing Search for Excellence. *Harvard Business Review* 61 (6): 78-88.

Chan, L. L. M., M. A. Shaffer, and E. Snape. 2004. In Search of Sustained Competitive Advantage: the Impact of Organizational Culture, Competitive Strategy and Human Resource Management Practices on Firm Performance. *International Journal of Human Resource Management* 15 (1): 17-35.

Chang, S. J. 2003. Ownership Structure, Expropriation, and Performance of Group-Affiliated Companies in Korea. *Academy of Management Journal* 46 (2): 238-253.

Chatman, J. A. 1991. Matching People and Organizations: Selections and Socialization in Public Accounting Firms. *Administrative Science Quarterly* 36: 459-484.

Chin, W. W. 1998. The Partial Least Squares Approach to Structural Equation Modeling. In *Modern Methods for Business Research*, ed. G. A. Marcoulides, 295-335. New Jersey: Lawrence Erlbaum Associates, Inc.

Chin, W. W., and P. R. Newsted. 1999. Structural Equation Modeling Analysis With Small Samples Using Partial Least Squares. In *Statistical Strategies for Small Sample Research*, ed. R. H. Hoyle, 307-341. California: Sage Publications.

Cho, M.-H. 1998. Ownership Structure, Investment, and the Corporate Value: An Empirical Analysis. *Journal of Financial Economics* 47: 103-121.

Claessens, S., S. Djankov, and L. Lang. 2000. The Separation of Ownership and Control in East Asian Corporations. *Journal of Financial Economics* 58 (1-2): 81-112.

Coakes, S. J., and L. G. Steed. 1999. *SPSS Analysis without Anguish: Version 11.0 for Windows*. Milton, QLD: John Wiley & Sons Australia, Ltd.

Cooke, R. A., and J. L. Szumal. 2000. Using the Organizational Culture Inventory to Understand the Operating Cultures of Organizations. In *Handbook of Organizational Culture and Climate*, eds. N. M. Ashkanasy, C. P. M. Wilderom and M. F. PetersonThousand Oaks, California: Sage Publications, Inc.

Cool, K., and J. Henderson. 1997. Factor and Regression Analysis, Power and Profits in Supply Chains. In *Statistical Model for Strategic Management*, eds. M. Ghertman, J. Obadia and J.-L. ArregleDordrecht: Kluwer Academic Publishers.

Cooper, D. R., and P. S. Schindler. 2003. *Business Research Methods*. 8th ed. New York: McGraw Hill.

Cooper, D. R., and P. . Schindler. 2008. *Business Research Methods*. 10th ed. New York: McGraw-Hill.

Coughan, A. T., and R. M. Schmidt. 1985. Executive Compensation, Managerial Turnover, and Firm Performance: An Empirical Investigation. *Journal of Accounting and Economics* 7: 43-66.

Creswell, J. W. 2002. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. New Jersey: Pearson Education, Inc.

Creswell, J. W. 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd ed. Thousand Oaks, California: Sage Publications, Inc.

Crutchey, C. E., C. D. Hudson, and M. R. H. Jensen. 1998. Shareholder Wealth Effects of CalPERS' Activism. *Financial Service Review* 7 (1): 1-10.

Daale, P. 2004. Colonial, Economic Rationalist, Or Collegial? Indonesian Business Leaders' Perceptions (2001) of G7 Behaviour. PhD diss., GSB-CBS, Curtin University of Technology.

Daily, C. M., D. R. Dalton, and A. A. Cannella Jr. 2003. Corporate Governance: Decades of Dialogue and Data. *Academy of Management Review* 28 (3): 371-382.

Daniri, M. A. 2005. *Good Corporate Governance: Konsep dan Penerapannya dalam Konteks Indonesia*. Jakarta: PT. Ray Indonesia.

Davies, P. 2006. Boards of Directors: the European Perspective. In *Corporate Governance in the US and Europe*, eds. G. Owen, T. Kirchmaier and J. Grant, 42-51. New York: Palgrave Macmillan.

De Witte, K., and J. J. Van Muijen. 1999. Organizational Culture. *European Journal of Work and Organizational Psychology* 8 (4): 497-502.

De Witte, K., and J. J. Van Muijen. 1999. Organizational Culture: Critical Questions for Researchers and Practitioners. *European Journal of Work and Organizational Psychology* 8 (4): 583-595.

Deal, T. E., and A. A. Kennedy. 1982. *Corporate Cultures: The Rites and Rituals of Corporate Life*. Reading, MA: Addison-Wesley.

Demsetz, H., and K. Lehn. 1985. The Structure of Corporate Ownership: Causes and Consequences. *The Journal of Political Economy* 93 (6): 1155-1177.

Denison, D. R. 1984. Bringing corporate culture to the bottom line. *Organizational Dynamics* 13 (2): 5-22. ScienceDirect. http://www.sciencedirect.com/science/article/B6W6S-4B55K06-Y/2/031b0ab64d10043981cccc83205f3e54 (accessed 22 May 2005).

Denison, D. R. 1990. *Corporate Culture and Organizational Effectiveness*. New York: John Wiley & Sons.

Denison, D. R. 1996. What is the Difference between Organizational Culture and Organizational Climate? A Native's Point of View on a Decade of Paradigm Wars. *Academy of Management Review* 21 (3): 619-654.

Denison, D. R., and A. K. Mishra. 1995. Toward a Theory of Organizational Culture and Effectiveness. *Organization Science* 6 (2): 204-223.

Denzin, N. K., and Y. S. Lincoln. 2000. The Discipline and Practice of Qualitative Research. In *The Handbook of Qualitative Research*, eds. N. K. Denzin and Y. S. Lincoln, 1-28. Thousand Oaks, California: Sage Publications, Inc.

Detert, J. R., R. G. Schroeder, and J. J. Mauriel. 2000. A Framework for Linking Culture and Improvement Initiatives in Organizations. *Academy of Management Review* 25 (4): 850-863.

Doll, W. J., W. Xia, and G. Torkzadeh. 1994. A Confirmatory Factor Analysis of the End-User Computing Satisfaction Instrument. *MIS Quarterly* 17 (4): 453-461.

Doyle, P. 1994. Setting Business Objectives and Measuring Performance. *European Management Journal* 12 (2):123-132.

du Toit, M., and S. du Toit. 2001. *Interactive LISREL: User's Guide*. Ilinois: Scientific Software International, Inc.

Ellinger, A. E., P. J. Daugherty, and S. B. Keller. 2000. The Relationship between Marketing/Logistics Interdepartmental Integration and Performance in U.S. Manufacturing Firms: An Empirical Study. *Journal of Business Logistics* 21 (1): 1-22.

Faccio, M., and M. A. Lasfer. 1999. *Managerial Ownership, Board Structure and Firm Value: The UK Evidence.* http://papers.ssrn.com/abstract=179008 (accessed 21 March 2007).
Fama, E. F. 1980. Agency Problems and the Theory of the Firm. *The Journal of Political Economy* 88 (2): 288-307.
Fan, X., B. Thompson, and L. Wang. 1999. Effects of Sample Size, Estimation Method, and Model Specification on Structural Equation Modeling Fit Indexes. *Structural Equation Modeling: A Multidisciplinary Journal* 6 (1): 56-83.
Farmer, S. M., J. M. Maslyn, D. B. Fedor, and J. S. Goodman. 1997. Putting Upward Influence Strategies in Context. *Journal of Organizational Behavior* 18: 17-42.
Farrar, J. 2005. *Corporate Governance: Theories, Principles, and Practice*. 2nd ed. South Melbourne: Oxford University Press.
FCGI. 2003. *Corporate Governance Background*. http://www.fcgi.or.id/English/002_03_BackGr_CG.htm (accessed 5 May 2005).
FCGI. 2003. *Corporate Governance Self Assessment Checklist*. http://www.fcgi.or.id/English/008_SelfAssessment.htm (accessed 11 May 2005).
Finkelstein, S., and R. A. D'Aveni. 1994. CEO Duality as A Double-Edged Sword: How Boards of Directors Balance Entrenchment Avoidance and Unity of Command. *Academy of Management Journal* 37 (5): 1079-1109.
Fleming, J. H., C. Coffman, and J. J. Harter. 2005. Manage Your Human Sigma. *Harvard Business Review* 83 (7): 106-116.
Florackis, C. 2005. Internal Corporate Governance Mechanisms and Corporate Performance: Evidence for UK Firms. *Applied Financial Economics Letters* 1: 211-216.
Forbes, D. P., and F. J. Miliken. 1999. Cognition and Corporate Governance: Understanding Boards of Directors as Strategic Decision-Making Groups. *Academy of Management Review* 24: 489-505.
Fornell, C. 1987. A Second Generation of Multivariate Analysis: Classification of Methods and Implications for Marketing Research. In *Review of Marketing*, ed. M. J. Houston, 407-450. Chicago: American Marketing Association.
Fornell, C., and F. L. Bookstein. 1982. Two Structural Equation Models: LISREL and PLS Applied to Consumer Exit-Voice Theory. *Journal of Marketing Research* 19: 440-450.
Fornell, C., and D. F. Larcker. 1981. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research* 18: 39-50.
Garson, D. G. 2006. *Structural Equation Modeling*. http://www2.chass.ncsu.edu/garson/pa765/structur.htm (accessed 15 November 2006).
Gedajlovic, E. R., and D. M. Shapiro. 1998. Management and Ownership Effects: Evidence from Five Countries. *Strategic Management Journal* 19: 533-553.
Gefen, D., D. W. Straub, and M.-C. Boudreau. 2000. Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communication of the Association for Information Systems* 4: 1-77.
Gerbing, D. W., and J. C. Anderson. 1985. The Effects of Sampling Error and Model Characteristics on Parameter Estimation for Maximum Likelihood

Confirmatory Factor Analysis. *Multivariate Behavioural Research* 20: 255-271.
Gerbing, D. W., and J. C. Anderson. 1988. An updated Paradigm for Scale Development Incorporating Unidimensionality and Its Assessment. *Journal of Marketing Research* 25: 186-192.
Gerbing, D. W., and J. G. Hamilton. 1996. Viability of Exploratory Factor Analysis as a Precursor to Confirmatory Factor Analysis. *Structural Equation Modeling* 3 (1): 62-72.
Gerbing, D. W., J. G. Hamilton, and E. B. Freeman. 1994. A Large-scale Second-order Structural Equation Model of the Influence of Management Participation on Organizational Planning Benefits. *Journal of Management* 20 (4): 859-885.
Gill, M., R. J. Flynn, and E. Reissing. 2005. The Governance Self-Assessment Checklist: An Instrument for Assessing Board Effectiveness. *Nonprofit Management & Leadership* 15 (3): 271-294.
Glunk, U. 1999. Realizing High Performance on Multiple Stakeholder Domains: A Resource-Based Analysis of Professional Service Firms in the Netherlands and Germany. PhD diss., University of Tilburg. http://center.uvt.nl/gs/thesis/glunk.html (accessed 18 May 2005).
Glunk, U., and C. P. M. Wilderom. 1996. *Organizational Effectiveness=Corporate Performance?* http://greywww.kub.nl:2080/greyfiles/few/1996/doc/715.pdf (accessed 20 April 2005).
Goldman, M. S., P. E. Greenbaum, and J. Darkes. 1997. A Confirmatory Test of Hierarchical Expectancy Structure and Predictive Power: Discriminant Validation of the Alcohol Expectancy Questionnaire. *Psychological Assessment* 9 (2): 145-157.
Gordon, G. G., and N. DiTomaso. 1992. Predicting Corporate Performance from Organizational Culture. *Journal of Management Studies* 29 (6): 783-798.
Guadagnoli, E., and W. F. Velicer. 1988. Relation of Sample Size to the Stability oc Component Patterns. *Psychological Bulletin* 103 (2): 265-275.
Guba, E. G., and Y. S. Lincoln. 1994. Competing Paradigm in Qualitative Research. In *Handbook of Qualitative Research*, eds. N. K. Denzin and Y. S. Lincoln, 105-117. Thousand Oaks, California: Sage Publications, Inc.
Hagger, M. S., and N. L. D. Chatzisarantis. 2005. First- and Higher-Order models of Attitudes, Normative Influence, and Perceived Behavioural Control in The Theory of Planned Behaviour. *The British Journal of Social Psychology* 44: 513-535.
Hair, J. F., R. E. Anderson, R. L. Tatham, and W. C. Black. 1998. *Multivariate Data Analysis*. 5th ed. New Jersey: Prentice-Hall International, Inc.
Haniffa, R. M., and T. E. Cooke. 2002. Culture, Corporate Governance and Disclosure in Malaysian Corporations. *ABACUS* 38 (3):
Hansen, G. S., and B. Wernerfelt. 1989. Determinants of Firm Performance: the Relative Importance of Economic and Organizational Factors. *Strategic Management Journal* 10 (5): 399-411.
Helfat, C. E., and M. A. Peteraf. 2003. The Dynamic Resource-Based View: Capability Lifecycles. *Strategic Management Journal* 24 (10): 997-1010.
Hermalin, B. E., and M. S. Weisbach. 2003. Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature. *FRBNY Economic Policy Review* April: 7-26.

Herman, E. S. 1981. *Corporate Control, Corporate Power*. New York: Cambridge University Press.

Herwidayatmo. 2003. *Penerapan Good Corporate Governance Principles di Pasar Modal Indonesia, Putaran 1 Tahun 2003: Forum Diskusi Ekonomi*. Yogyakarta, Indonesia: UGM, BI Yogyakarta, UAJY.

Heuer, M., J. L. Cummings, and W. Hutabarat. 1999. Cultural Stability or Change Among Managers in Indonesia? *Journal of International Business Studies* 30 (3): 599-610.

Hill, C. W. L. 1985. Internal Organization and Enterprise Performance: Some UK Evidence. *Managerial and Decision Economics* 6 (4): 210-218.

Hill, C. W. L., and S. A. Snell. 1988. External Control, Corporate Strategy, and Firm Performance in Research-Intensive Industries. *Strategic Management Journal* 9: 577-590.

Himmelberg, C. P., R. L. Hubbard, and D. Palia. 1999. Understanding the Determinants of Managerial Ownership and the Link between Ownership and Performance. *Journal of Financial Economics* 53: 353-384.

Hitt, M. A., L. Bierman, K. Shimizu, and R. Kochhar. 2001. Direct and Moderating Effects of Human Capital on Strategy and Performance in Professional Service Firms: A Resource-Based Perspective. *Academy of Management Journal* 44 (1): 13-28.

Hofmann, D. A. 1997. An overview of the Logic and Rationale of Hierarchical Linear Models. *Journal of Management* 23 (6): 723-744.

Hofstede, G. 1983. The Cultural Relativity of Organizational Practices and Theories. *Journal of International Business Studies* 14 (2): 75-89.

Hofstede, G. 1986. Editorial: The Usefulness of the 'Organizational Culture' Concept. *Journal of Management Studies* 23 (3): 253-257.

Hofstede, G. 2001. Culture in Organizations. In *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organization Across Nations*, 384-385. London: Sage Publications.

Hofstede, G. 2004. Business Goals and Corporate Governance. *Asia Pacific Business Review* 10 (3/4): 292-301.

Hofstede, G., B. Neuijen, D. D. Ohavy, and G. Sanders. 1990. Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases. *Administrative Science Quarterly* 35 (2): 286-316.

Holmes-Smith, P. 2001. *Introduction to Structural Equation Modeling Using LISREL*. Perth: ACSPRI.

Hopt, K. J. 1998. The German Two-Tier Board: Experience, Theories, Reforms. In *Comparative Corporate Governance: The State of the Art and Emerging Research*, eds. K. J. Hopt, H. Kanda, M. J. Roe, E. Wymeersch and S. Prigge, 227-258. Oxford: Oxford University Press.

Hoskisson, R. E., J. S. Harrison, and D. A. Dubofsky. 1991. Capital Market Evaluation of M-Form Implementation and Diversification Strategy. *Strategic Management Journal* 12 (4): 271-279.

Hoskisson, R. E., R. A. Johnson, and D. D. Moesel. 1994. Corporate Divestiture Intensity in Restructuring Firms: Effects of Governance, Strategy, and Performance. *Academy of Management Journal* 37 (5): 1207-1251.

Hu, L.-t., and P. M. Bentler. 1995. Evaluating Model Fit. In *Structural Equation Modeling: Concepts, Issues, and Applications*, ed. R. H. Hoyle, 76-99. Thousand Oaks, CL: SAGE Publication, Inc.

Hu, L.-t., and P. M. Bentler. 1999. Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equation Modeling: A Multidisciplinary Journal* 6 (1): 1-55.

Huang, K.-K. 2003. Is Organizational Culture Explicitly Linked to Perceived Corporate Performance? A Multidimensional Analysis of Corporate Culture and Perceived Corporate Performance in the United States and Taiwan. Ph.D dis., Nova Southeastern University. http://proquest.umi.com.dbgw.lis.curtin.edu.au/pqdweb?index=0&did=764944041&SrchMode=2&sid=3&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1211173529&clientId=22212 (accessed 23 March 2005)

Hulland, J. 1999. Use of Partial Least Squares (PLS) in Strategic Management Research: A Review of Four Recent Studies. *Strategic Management Journal* 20 (2): 195-204.

Huselid, M. A. 1995. The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. *Academy of Management Journal* 38 (3): 635-672.

Huselid, M. A., S. E. Jackson, and R. S. Schuler. 1997. Technical and Strategic Human Resource Management Effectiveness as Determinants of Firm Performance. *Academy of Management Journal* 40 (1): 171-188.

Husnan, S. 2000. Indonesia. In *Corporate Governance and Finance in East Asia: A Study of Indonesia, Republic of Korea, Malaysia, Philippines, and Thailand*, eds. M. V. Capulong, D. Edwards, D. Webb and J. ZhuangManila: Asian Development Bank.

Huson, M. R., R. Parrino, and L. T. Starks. 2001. Internal Monitoring Mechanisms and CEO Turnover: A Long-Term Perspective. *The Journal of Finance* 56 (6): 2265-2297.

Indonesia Country Assistance Strategy FY 04-07.2003. Washington: World Bank. http://siteresources.worldbank.org/INTINDONESIA/Resources/CAS/CAS04-07.pdf (accessed 26 August 2004).

Jensen, M. C., and W. H. Meckling. 1976. Theory of The Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* 3: 305-360.

Jones, I., and M. Pollitt. 2004. Understanding How Issues in Corporate Governance Develop: Cadbury Report to Higgs Review. *Corporate Governance: An Internationl Review* 12 (2): 162-171.

Jöreskog, K. G. 1970. A General Method for Analysis of Covariances Structures. *Biometrika* 57: 239-251.

Jöreskog, K. G. 1993. Testing Structural Equation Models. In *Testing Structural Equation Models*, eds. K. A. Bollen and J. S. Long, 295-316. Newbury Park, CL: SAGE Publications, Inc.

Jöreskog, K. G. 2005. *Structural Equation Modeling with Ordinal Variables using LISREL*. http://www.ssicentral.com/lisrel/techdocs/ordinal.pdf (accessed 16 November 2006).

Jöreskog, K. G., and D. Sörbom. 1989. *LISREL 7: A Guide to the Program and Applications*. 2nd ed. Chicago, IL: SPSS, Inc.

Jöreskog, K. G., and D. Sörbom. 1993. *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Chicago, IL: Scientific Software International, Inc.

Jöreskog, K. G., and D. Sörbom. 1996. *LISREL 8: User's Reference Guide*. Chicago, IL: Scientific Software International.
Jöreskog, K. G., and D. Sörbom. 2006. *Interactive LISREL 8.8*. http://www.ssicentral.com/lisrel/WebHelp/index.htm (accessed 15 December 2006).
Kahn, K. B. 2001. Market Orientation, Interdepartmental Integration, and Product Development Performance. *Journal of Product Innovation Management* 18: 314-323.
Kaplan, D., and P. R. Elliott. 1997. A Model-Based Approach to Validating Education Indicators Using Multilevel Structural Equation Modeling. *Journal of Educational and Behavioral Statistics* 22 (3): 323-347.
Kaplan, S. N. 1997. Corporate Governance and Corporate Performance: A Comparison of Germany, Japan, and the U.S. *Journal of Applied Corporate Finance* 9 (4): 86-93.
Kaplan, S. N. 2006. The State of US Corporate Boards and Governance: What is Right and Wrong? In *Corporate Governance in the US and Europe*, eds. G. Owen, T. Kirchmaier and J. Grant, 37-41. New York: Palgrave Macmillan.
Kelloway, E. K. 1998. *Using LISREL for Structural Equation Modeling: A Researcher's Guide*. Thousand Oaks, CL: SAGE Publications, Inc.
Kerlinger, F. N., and H. B. Lee. 2000. *Foundations of Behavioral Research*. 4th ed. Orlando: Harcourt College Publisher.
Kerr, J. E., and R. A. Bettis. 1987. Boards of Directors, Top Management Compensation, and Shareholder Returns. *Academy of Management Journal* 30: 645-664.
Kingman-Brundage, J., W. R. George, and D. E. Bowen. 1995. Service Logic: Achieving Service System Integration. *International Journal of Service Industry Management* 6 (4): 20-39.
Kirkman, B. K., and B. Rosen. 1999. Beyond Self-Management: Antecedents and Consequences of Team Empowerment. *Academy of Management Journal* 42 (1): 58-74.
Klein, A. 1998. Firm Performance and Board Committee Structure. *Journal of Law and Economics* 41 (1): 275-303.
Kline, T. J. B., L. M. Sulsky, and S. D. Rever-Moriyama. 2000. Common Method Variance and Specification Errors: A Practical Approach to Detection. *The Journal of Psychology* 134 (4): 401-421.
Kohli, A. K., and B. J. Jaworski. 1990. Marketing Orientation: The Construct, Research Proposition, and Managerial Implication. *Journal of Marketing* 54 (2): 1-18.
Kostova, T. 1999. Transnational Transfer of Strategic Organizational Practices: A Contextual Perspective. *Academy of Management Review* 24 (2): 308-314.
Kotha, S., B. Vadlamani, and A. Nair. 1997. Generic Strategy Research: Application of LISREL and Smalest Space Analysis. In *Statistical Model for Strategic Management*, eds. M. Ghertman, J. Obadia and J.-L. ArregleDordrecht: Kluwer Academic Publishers.
Kotter, J. P., and J. L. Heskett. 1992. *Corporate Culture and Performance*. New York: The Free Press.
La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 1999. Corporate Ownership around the World. *The Journal of Finance* 54 (2): 471-517.
La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny. 1998. Law and Finance. *Journal of Political Economy* 106: 1113-1155.

Laroche, M., C. Kim, M. A. Tomiuk, and D. Bélisle. 2005. Similarities in Italian and Greek Multidimensional Ethnic Identity: Some Implication for Food Consumption. *Canadian Journal of Administrative Science* 22 (2): 143-168.

Lawler III, E. E., and D. L. Finegold. 2005. The Changing Face of Corporate Boards. *MIT Sloan Management Review* 46 (2):67-71.

Lawrence, J. J., and G. P. Stapledon. 1999. *Is Board Composition Important? A Study of Listed Australian Companies.* http://papers.ssrn.com/abstract=193528 (accessed 21 March 2007).

Leblanc, R. 2004. What's Wrong with Corporate Governance: a note. *Corporate Governance: An International Review* 12 (4):436-441.

Leblanc, R., and J. Gillies. 2005. *Inside the Boardroom*. Ontario: John Wiley & Sons Canada, Ltd.

Lewis, D. S. 1994. Organizational Change: Relationship between Reactions Behaviour and Organizational Performance. *Journal of Organizational Change Management* 7 (5): 41-55.

Licht, A. N. 2001. The Mother of All Path Dependencies: Toward a Cross-Cultural Theory of Corporate Governance Systems. *Delaware Journal of Corporate Law* 26 (1): 147-205. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=266910 (accessed 9 December 2004).

Lim, B. 1995. Examining the Links between Organisational Culture and Organizational Performance. *Leadership and Organizational Development Journal* 16 (5): 16-21.

Lincoln, Y. S., and E. G. Guba. 2000. Paradigmatic Controversies, Contradictions, and Emerging Confluences. In *The Handbook of Qualitative Research*, eds. N. K. Denzin and Y. S. Lincoln, 163-188. Thousand Oaks, California: Sage Publications, Inc.

Lipton, M. 2006. The Role of the Board of Directors. In *Corporate Governance in the US and Europe*, eds. G. Owen, T. Kirchmaier and J. Grant, 47-51. New York: Palgrave Macmillan.

Little, R. J. A., and D. B. Rubin. 2002. *Statistical Analysis with Missing Data*. 2nd ed. New Jersey: John Wiley & Sons, Inc.

Loderer, C., and K. Martin. 1997. Executive Stock Ownership and Performance Tracking Faint Traces. *Journal of Financial Economics* 45: 223-255.

Lukviarman, N. 2001. Key Characteristics of Corporate Governance: The Case of Indonesia. In *Working Paper Series 01.01*. Perth: Graduate School of Business, Curtin University of Technology.

Lukviarman, N. 2004. Ownership Structure and Firm Performance: The Case of Indonesia. Ph.D diss., Graduate School of Business, Curtin University of Technology.

Mak, Y. T., and Y. Li. 2001. Determinants of Corporate Ownership and Board Structure: Evidence from Singapore. *Journal of Corporate Finance* 7:235-256.

Marcoulides, G. A., and R. H. Heck. 1993. Organizational Culture and Performance: Proposing and Testing a Model. *Organization Science* 4 (2): 209-225.

Marsh, H. W. 1994. Confirmatory Factor Analysis Models of Factorial Invariance: A Multifaceted Approach. *Structural Equation Modeling* 1 (1): 5-34.

Mathieu, J. E., L. L. Gilson, and T. M. Ruddy. 2006. Empowerment and Team Effectiveness: An Empirical Test of an Integrated Model. *Journal of Applied Psychology* 91 (1): 97-108.

Matolcsy, Z., D. Stokes, and A. Wright. 2004. Do Independent Directors Add Value? *Australian Accounting Review* 14 (1): 33-41.
McCawley, P. 2005. *Governance in Indonesia: Some Comments, 16-17 September 2005: Toward a New Indonesia.* Yogyakarta, Indonesia: Faculty of Economics Gadjah Mada University.
Mehran, H. 1995. Executive Compensation Structure, Ownership, and Firm Performance. *Journal of Financial Economics* 38: 163-184.
Mizruchi, M. S. 1983. Who Controls Whom? An Examinantion of the Relation between Management and Boards of Directors in Large American Corporations. *Academy of Management Journal* 8: 426-435.
Monks, R., and R. Minow. 2004. *Corporate Governance*. 3rd ed. Malden, MA: Blackwell Publising.
Morck, R., A. Shleifer, and R. W. Vishny. 1988. Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics* 20: 293-315.
Mulaik, S. A., and R. P. McDonald. 1978. The Effect of Additional Variables on Factor Indeterminacy in Models with a Single Common Factor. *Psychometrika* 43 (2): 177-192.
Murphy, K. J. 1985. Corporate Performance and Managerial Remuneration: An Empirical Analysis. *Journal of Accounting and Economics* 7: 1-32.
Nahm, A. Y., M. A. Vonderembse, and X. A. Koufteros. 2004. The Impact of Organizational Culture on Time-Based Manufacturing and Performance. *Decision Sciences* 35 (4): 579-607.
Nam, S.-W., and I. C. Nam. 2004. *Corporate Governance in Asia*: Asian Development Bank Institute.
Narver, J. C., and S. F. Slater. 1990. The Effect of a Market Orientation on Business Profitability. *Journal of Marketing* 54 (October): 20-35.
Nasution, A. 2003. *Peran BPK dalam Meningkatkan Transparansi Dan Akuntabilitas Negara*. http://www.komisihukum.go.id/newsletter.php?act=detil&1d=128 (accessed 13 February 2007).
NCCG. 2001. Code for Good Corporate Governance Ref. 4.0. The National Committee for Corporate Governance.
NCCG. 2004. Pedoman Komisaris Independen dan Pedoman Pembentukan Komite Audit yang Efektif. Gugus Kerja Komite Nasional Kebijakan Corporate Governance.
O'Reilly, C. A., and J. A. Chatman. 1996. Culture as Social Control: Corporations, Cults, and Commitment. *Research in Organizational Behavior* 18: 157-200.
O'Reilly, C. A., J. A. Chatman, and D. Cadwell. 1991. People and Organizational Culture: A Profile Comparison Approach to Assessing Person-Environment Fit. *Academy of Management Journal* 34: 487-516.
OECD. 1999. *Principles of Corporate Governance*. Paris: The OECD.
Ouchi, W. G., and R. L. Price. 1978. Hierarchies, Clans, and Theory Z: A New Perspective on Organizational Development. *Organizational Dynamics* 7 (2): 25-44.
Parker, C. P., B. B. Baltes, S. A. Young, J. W. Huff, R. A. Altmann, H. A. Lacost, and J. E. Roberts. 2003. Relationships between Psychological Climate Perceptions and Work Outcomes: A Meta-Analytic Review. *Journal of Organizational Behavior* 24: 389-416.

Parker, L. D.. 2007. Internal Governance in the Nonprofit Boardroom: a participant observer study. *Corporate Governance: An International Review* 15 (5):923-934.

Pearce II, J. A., and S. A. Zahra. 1991. The Relative Power of CEOs and Boards of Directors: Associations with Corporate Performance. *Strategic Management Journal* 12 (2): 135-153.

Peteraf, M. A. 1993. The Cornerstones of Competitive Advantage: A Resource-Based View. *Strategic Management Journal* 14 (3): 179-191.

Peters, T. J., and R. H. Waterman. 1982. *In Search of Excellence: Lessons from America's Best-Run Companies*. New York: Harper & Row.

Pettigrew, A. M. 1979. On Studying Organizational Cultures. *Administrative Science Quarterly* 24: 570-581.

Petty, M. M., N. A. Beadles II, C. M. Lowery, D. F. Chapman, and D. W. Connel. 1995. Relationships between Oragnizational Culture and Organizational Performance. *Psychological Reports* 76: 483-492.

Podsakoff, N. P., and D. W. Organ. 1986. Self-Reports in Organizational Research: Problems and Prospects. *Journal of Management* 12 (4): 531-544.

Podsakoff, P. M., S. B. MacKenzie, J.-Y. Lee, and N. P. Podsakoff. 2003. Common Method Biases in Behavioral Research: A Critical Review of The Literature and Recommended Remedies. *Journal of Applied Psychology* 88 (5): 879-903.

Porter, M. E. 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press.

Raaijmakers, Q. A. 1999. Effectiveness of Different Missing Data Treatments in Survesy with Likert-Type Data: Introducing The Relative Mean Substitution Approach. *Educational and Psychological Measurement* 59 (5): 725-748. Sage Journal Online. http://epm.sagepub.com/cgi/content/abstract/59/5/725 (accessed 14 December 2007).

Ramsey, G. 2007. The Fundamental Constraint on the Evolution of Culture. *Biology and Philosophy* 22:401-414.

Redmon, W. K., and M. A. Mason. 2001. Organizational Culture and Behavioral System Analysis. In *Handbook of Organizational Performance: Behavior Analysis and Management*, eds. C. M. Johnson, W. K. Redmon and T. C. Mawhinney, 437-456. New York: The Haworth Press.

Rigdon, E. 2006. *Ed Rigdon's Structural Equation Modeling Page*. http://www2.gsu.edu/~mkteer/index.html (accessed 16 November 2006).

Rigdon, E. E. 1998. Structural Equation Modeling. In *Modern Methods for Business Research*, ed. G. A. Marcoulides, 251-294. New Jersey: Lawrence Erlbaum Associates, Inc.,.

Saffold III, G. S. 1988. Culture Traits, Strength, and Organizational Performance: Moving Beyond "Strong" Culture. *Academy of Management Review* 13 (4): 546-558.

Sathe, V. 1983. Implications of Corporate Culture: A Manager's Guide to Action. *Organizational Dynamics* 12 (2): 5-23.

Sato, Y. 2004. Corporate Governance in Indonesia: A Study on Governance of Business Groups. In *Asian Development Experience: The Role of Governance in Asia*, ed. Y. Shimomura, Singapore: Institute of Southeast Asian Studies. http://www.ide.go.jp/English/Research/Rschers/pdf/sato_y_iseas.pdf (assessed 12 June 2005)

Sawner, T. E. 2000. An Empirical Investigation of the Relationship between Organizational Culture and Organizational Performance in a Large Public Sector Organization. Ph.D diss., The George Washington University. http://proquest.umi.com.dbgw.lis.curtin.edu.au/pqdweb?index=0&did=730650601&SrchMode=2&sid=3&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1211176700&clientId=22212 (accessed 20 July 2005)

Schall, M. 1983. A Communications-Rules Approach to Organizational Culture. *Administrative Science Quarterly* 28: 557-581.

Schein, E. H. 1984. Coming to a New Awareness of Organizational Culture. *Administrative Science Quarterly* 25 (2): 3-16.

Schein, E. H. 1985. *Organizational Culture and Leadership*. San Francisco: Jossey-Bass.

Schein, E. H. 1991. The Role of the Founder in the Creation of Organizational Culture. In *Reframing Organizational Culture*, eds. P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg and J. Martin, 14-25. Beverly Hills, CA: Sage.

Schein, E. H. 1992. *Organizational Culture and Leadership*. 2nd ed. San Francisco: Jossey-Bass Publisher.

Schein, E. H. 2000. Sense and Nonsense About Culture and Climate. In *Handbook of Organizational Culture and Climate*, eds. N. M. Ashkanasy, C. P. M. Wilderom and M. F. PetersonThousand Oaks, California: Sage Publications, Inc.

Schneider, B. 2000. The Psychological Life of Organizations. In *Handbook of Organizational Culture and Climate*, eds. N. M. Ashkanasy, C. P. M. Wilderom and M. F. PetersonThousand Oaks, California: Sage Publications, Inc.

Schneider, S. E., and A. DeMeyer. 1991. Interpreting and Responding to Strategic Issues: The Impact of National Culture. *Strategic Management Journal* 14 (2): 61-73.

Schumacker, R. E., and R. G. Lomax. 1996. *A Beginner's Guide to Structural Equation Modelling*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publisher.

Schumacker, R. E., and R. G. Lomax. 2004. *A Beginner's Guide to Structural Equation Modeling*. 2nd ed. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Schwab, D. P. 2005. *Research Methods for Organizational Studies*. Second ed. Mahwah, New Jersey: Erlbaum Associates.

Schwartz, H., and S. M. Davis. 1981. Matching Corporate Culture and Business Strategy. *Organizational Dynamics* 10 (1): 30-48.

SCTV. 2007. *Pejabat Dinilai Tidak Becus Menuntaskan Kasus Korupsi*. http://www.liputan6.com/view/2,140730,1,0,1177587088.html (accessed 26 April 2007).

Sekaran, U. 2000. *Research Methods for Business: A Skill Building Approach*. 3rd ed. New York: John Wiley and Sons.

Semenov, R. 2000. Cross-Country Differences in Economic Governance: Culture as a Major Explanatory Factor. PhD diss., University of Tilburg. http://center.uvt.nl/gs/thesis/semenov.html (accessed 18 May 2005).

Sethi, V., and W. R. King. 1994. Development of Measures to Assess the Extent to Which an Information Technology Application Provides Competitive Advantage. *Management Science* 40 (12): 1601-1627.

Shleifer, A. 2006. Is There a Major Problem with Corporate Governance in the United States? In *Corporate Governance in the US and Europe*, eds. G. Owen, T. Kirchmaier and J. Grant, 91-95. New York: Palgrave Macmillan.
Shleifer, A., and R. W. Vishny. 1986. Large Shareholders and Corporate Control. *The Journal of Political Economy* 94 (3): 461-488.
Shleifer, A., and R. W. Vishny. 1997. A Survey of Corporate Governance. *The Journal of Finance* 52 (2): 737-783.
Siehl, C., and J. Martin. 1988. Measuring Organizational Culture: Mixing Qualitative and Quantitaive Methods. In *Inside Organizations: Understanding the Human Dimension*, eds. M. O. Jonnes, M. D. Moore and R. C. Snyder, 79-103. London: Sage Publications.
Silverzweig, S., and R. F. Allen. 1976. Changing the Corporate Culture. *Sloan Management Review* 17 (3): 33-49.
Sin, L. Y. M., G. W. H. Cheung, and R. Lee. 1999. Methodology in Cross Cultural Consumer Research: A Review and Critical Assessment. *Journal of International Consumer Marketing* 11 (4): 75-96.
Smith, J. K. 1983. Quantitative Versus Qualitative Research: An Attempt to Clarify the Issue. *Educational Researcher* March: 6-13.
Sorensen, J. B. 2002. The Strength of Corporate Culture and the Reliability of Firm Performance. *Administrative Science Quarterly* 47: 70-91.
Spreitzer, G. M., M. A. Kizilos, and W. N. Stephen. 1997. A Dimensional Analysis of the Relationship between Psychological Empowerment and Effectiveness, Satisfaction, and Strain. *Journal of Management* 23 (5): 679-704.
SPSS. 2004. *SPSS 13.0 for Windows*. Chicago, IL: SPSS Inc.
SSI Scientific Software International. 2006. http://www.ssicentral.com/lisrel/index.html (accessed 15 November 2006).
Stavrou, E. T., C. Charalambous, and S. Spiliotis. 2007. Human Resource Management and Performance: A Neural Network Analysis. *European Journal of Operational Research* 181 (1): 453-467.
Steiger, J. H. 1990. Structural Model Evaluation and Modification: An Interval Estimation Approach. *Multivariate Behavioural Research* 25 (2): 173-180.
Stulz, R. M., and R. Williamson. 2002. *Culture, Openness, and Finance*. http://www.wcfia.harvard.edu/papers/565__Culture,Openness&Finance-110502.pdf (accessed 1 December 2004).
Tabalujan, B. S. 1997. *Indonesian Company Law: A Translation and Commentary*. Hongkong and Singapore: Sweet & Maxwell Asia.
Tabalujan, B. S. 2002. Family Capitalism and Corporate Governance of Family-Controlled Listed Companies in Indonesia. *UNSW Law Journal* 25 (2): 486-514.
Tabalujan, B. S. 2002. Why Indonesian Corporate Governance Failed-Conjectures Concerning Legal Culture. *Columbia Journal of Asia Law* 15 (2):
Tanaka, J. S. 1987. "How Big Is Big Enough?": Sample Size and Goodness of Fit in Structural Equation Models with Latent Variables. *Child Development* 58 (1): 134-146.
Thompson, R. S. 1981. Internal Organization and Profit: A Note. *The Journal of Industrial Economics* 30 (2): 201-211.
Thomsen, S., and T. Pedersen. 2000. Ownership Structure and Economic Performance in the Largest European Companies. *Strategic Management Journal* 21: 689-705.

TIAA-CREF A Concerned Investor. 2005. http://www.tiaa-cref.org/pubs/pdf/concerned_investor.pdf (accessed 20 February 2005).
Tricker, R. I. 1994. *International Corporate Governance: Text, Readings and Cases*. Sydney: Prentice Hall.
Trompenaars, F., and C. Hampden-Turner. 1997. *Riding The Waves of Culture: Understanding Cultural Diversity in Business*. 2nd ed. London: Nicholas Brealey.
Usunier, J.-C. 1998. *International & Cross-Cultural Management Research*. London: Sage Publications, Ltd.
Van den Berg, P. P., and C. P. M. Wilderom. 2004. Defining, Measuring, and Comparing Organisational Cultures. *Applied Psychology: An International Review* 53 (4): 570-582.
Van Maanen, J., and J. Barley. 1984. Occupational Communities: Culture and Control in Organizations. In *Research in Organizational Behavior*, ed. B. M. Staw and L. L. Cummings, 287-365. Greenwich, CT: JAI Press.
Van Muijen, J. J., P. Koopman, K. De Witte, G. De Cock, Z. Susanj, C. Lemoine, D. Bourantas, N. Papalexandris, I. Branyicski, E. Spaltro, J. Jesuino, J. G. Das Neves, H. Pitariu, E. Konrad, J. Peiro, V. Gonzalez-Roma, and D. Turnipseed. 1999. Organizational Culture: The Focus Questionnaire. *European Journal of Work and Organizational Psychology* 8 (4): 551-568.
Venkatraman, N. 1989. Strategic Orientation of Business Enterprises: The Construct, Dimensionality, and Measurement. *Management Science* 35 (8): 942-962.
Venkatraman, N., and V. Ramanujam. 1986. Measurement of Business Performance in Strategy Research: A Comparison of Approaches. *The Academy of Management Review* 11 (4): 801-814.
Walsh, J. P., and J. K. Seward. 1990. On the Efficiency of Internal and External Corporate Control Mechanisms. *The Academy of Management Review* 15 (3): 421-458.
Weick, K. 1985. The Significance of Corporate Culture. In *Organizational Culture*, eds. P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg and J. Martin, 381-389. Beverly Hills, CA: Sage.
West, S. G., J. F. Finch, and P. J. Curran. 1995. Structural Equation Models with Nonnormal Variables: Problems and Remedies. In *Structural Equation Modeling: Concepts, Issues, and Applications*, ed. R. H. Hoyle, 56-75. Thousand Oaks, CA: Sage.
Wilderom, C. P. M., U. Glunk, and R. Maslowski. 2000. Organizational Culture as a Predictor of Organizational Performance. In *Handbook of Organizational Culture & Climate*, eds. N. M. Ashkanasy, C. P. M. Wilderom and M. F. Peterson, 198-199. London: Sage Publications, Inc.
Wilderom, C. P. M., and P. P. Van den Berg. 1998. *A Test of the Leadership-Culture-Performance Model within a Large Dutch Financial Organization*, 1998: *The annual meeting of the Academy of Management: Best paper proceedings.* San Diego, CA: Academy of Management.
Wilderom, C. P. M., and P. P. Van den Berg. 2000. Firm Culture and Leadership as Firm Performance Predictors: A Resource-Based Perspective. In *Working Paper.* Tilburg: Tilburg University.
Wilderom, C. P. M., and P. P. Van den Berg. 2005. Do Transformational Leadership and Organizational Culture Affect Organizational Performance? In *Working Paper.* Tilburg: University of Tilburg.

Williamson, O. E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
Wood, V. R., S. Bhuian, and P. Kiecker. 2000. Market Orientation and Organizational Performance in Not-for-Profit Hospitals. *Journal of Business Research* 48: 213-226.
Yermack, D. 1996. Higher Market Valuation of Companies with a Small Board of Directors. *Journal of Financial Economics* 40: 185-211.
Yoshimori, M. 2005. Does Corporate Governance Matter? Why the Corporate Performance of Toyota and Canon is Superior to GM and Xerox. *Corporate Governance* 13 (3): 447-457.
Zahra, S. A. 1996. Governance, Ownership, and Corporate Entrepreneurship: The Moderating Impact of Industry Technological Opportunities. *Academy of Management Journal* 39: 1713-1735.
Zahra, S. A., D. O. Neubaum, and M. Huse. 2000. Entrepreneurship in Medium Size Companies: Exploring the Effects of Ownership and Governance Systems. *Journal of Management* 26: 947-976.
Zikmund, W. G. 2003. *Business Research Methods*. 7 ed. Ohio: South-Western.

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Appendix 1: Semi-Structured Interview Questions

1. To date there are many discussions in regard to internal corporate governance. As a manager or executive or commissioner of the company/an expert or a researcher of this topic, what does come up in your mind when you hear the term internal corporate governance?

2. Could you explain in details about this, please?

3. Are there any particular characteristics that can differentiate well-governed firm with those of bad-governed firm? Please explain.

4. How do you measure these characteristics?

5. Could you provide examples–according to your evaluation–that the board of commissioners has performed a proper act?

6. Could you give examples–according to your evaluation–that the board of commissioners has performed an improper act?

7. Could you provide examples–according to your evaluation–that the board of directors has performed a proper act?

8. Could you give examples–according to your evaluation–that the board of directors has performed an improper act?

9. Could you provide examples–according to your evaluation–that the internal control group has performed a proper act?

10. Could you give examples–according to your evaluation–that the internal control group has performed an improper act?

11. With corporate governance in place within organisation, what impacts would emerge?

12. Do you have any further comments on this topic?

Appendix 2: Questionaire in English

No: _____

Dear Participant,

This questionnaire is designed to study aspects of organisational culture, internal corporate governance and performance at a company. The information you provide will help me better understand the way organisation is run. Because *you* are the one who can give me a correct picture of how organisation is performing, I request you to respond to the question frankly and honestly.

Your response will be kept *strictly confidential*. No one other than me will have access to the information you give. In order to ensure the utmost privacy, I have provided an identification number for each participant. This number will be used for follow-up procedure only. The numbers, names, and questionnaire will not be made available to anyone other than me.

A summary of the result will be mailed to you upon your request after the data are analysed.

Thank you very much for your time and cooperation. I greatly appreciate your organisation and your help in furthering this research endeavour.

Cordially,

Amin Wibowo
Researcher

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QUESTIONNAIRE

GENERAL INSTRUCTIONS

- There is no right or wrong answer. Therefore, please answer the questions to the best of your knowledge by giving a circle to the most appropriate number provided.
- The example of how to answer the questionnaire:

	Strongly Disagree ⟷ Strongly Agree					
The sky is blue	1	2	3	4	⑤	6

With the following scale:

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Therefore, by giving a circle to number 5, you would be saying that you agree with the given statement.

DEFINITION

For the purpose of this study, the following definition will be used:

- ***Organisational Culture***: Particular ways of conducting organisational functions that have evolved over time under the influence of an organisation's history, people, interests, and actions and that have become institutionalised in the organisation (Wilderom and Van den Berg 2000).
- ***Internal Corporate Governance***: The specific mechanisms and actions taken by individual firms to enforce control and accountability which are centred on board commissioners, independent commissioners, audit committee, board of directors (executive management), internal control group, within which their activities are reinforced by codes of conduct that intended to promote proper behaviour.
- ***Perceived Performance***: The degree of improvement needed by the organisation in the following dimensions: efficiency, customer satisfaction, managerial behavior, professional behavior, service quality, contact with clients, position on the market, and reputation (Kostova 1999, p. 309).

SECTION 1: ORGANISATIONAL CULTURE

Subsection 1.1: Autonomy

These statements below are associated with the degree to which employees have decision latitude in their jobs. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent does the following occur in your organisation?

	Strongly Disagree ← → Strongly Agree					
There is room for non-managerial employees to make their own decisions	1	2	3	4	5	6
There is freedom for employees to depart from rules	1	2	3	4	5	6
There is freedom for employees to implement decisions according to their own views	1	2	3	4	5	6
Employees influence important decisions concerning work	1	2	3	4	5	6
There is freedom for employees to plan their own work	1	2	3	4	5	6
There is an opportunity for employees to bring forward ideas before decisions are made	1	2	3	4	5	6

Subsection I.2: External Orientation

These statements below are associated with the degree to which employees see the practice of the relationship between organisation and its environments. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent does the following occur in your organisation?

	Strongly Disagree ← → Strongly Agree					
There is a quick reaction to developments in the market	1	2	3	4	5	6
There is an investigation of the wishes and needs of customers	1	2	3	4	5	6
There is active canvassing of new customers	1	2	3	4	5	6
Company is working to improve the local market position	1	2	3	4	5	6
There is a thorough training of employees in systematically gathering information on what customers want to see improved	1	2	3	4	5	6
Company has an edge over local competitors	1	2	3	4	5	6

Subsection 1.3: Inter-departmental Coordination

These statements below are associated with the degree to which employees see the practice of the relationship between their department and other department within organisation. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent does the following occur in your organisation?

	Strongly Disagree ← → Strongly Agree					
There is useful cooperation between departments	1	2	3	4	5	6
There is exchange of useful information between departments	1	2	3	4	5	6
Departments support one another in the resolution of problems	1	2	3	4	5	6
There is mutual communication between heads of departments	1	2	3	4	5	6
Working with someone from another part of this organisation is like working with someone from a different organisation	1	2	3	4	5	6
Work is organised so that each person can see the relationship between his or her job and the goals of the organisation	1	2	3	4	5	6
Cooperation across different parts of the organisation is actively encouraged	1	2	3	4	5	6

Subsection 1.4: Human Resource Management

These statements below are associated with the degree to which employees see the practice of human resource management in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent does the following occur in your organisation?

	Strongly Disagree ← → Strongly Agree					
Performance appraisals are taken seriously	1	2	3	4	5	6
Employees obtain useful information about their functioning	1	2	3	4	5	6
There is careful selection of new personnel	1	2	3	4	5	6
Job competency is the only criterion in hiring people	1	2	3	4	5	6
Employees are told when a good job is done	1	2	3	4	5	6
Managers help good people to advance	1	2	3	4	5	6
There is little concern for personal problems of employees	1	2	3	4	5	6

Subsection 1.5: Improvement Orientation

These statements below are associated with the degree to which employees see the practice of the improvement orientation within their organisation. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent does the following occur in your organisation?

	Strongly Disagree ← → Strongly Agree					
Employees closely monitor their own way of working	1	2	3	4	5	6
Employees search for possibilities to improve the organisation	1	2	3	4	5	6
There are initiatives taken by employees to improve the way in which the work is done	1	2	3	4	5	6
New and improved ways to do work are continually adopted	1	2	3	4	5	6
Employees try to be pioneers	1	2	3	4	5	6
People put in maximal effort	1	2	3	4	5	6
Think three years or more ahead	1	2	3	4	5	6

2. INTERNAL CORPORATE GOVERNANCE

2.1: Duties of Board of Commissioners

These statements below associate with the degree to which employees see the fulfilment of the duties of board of commissioners in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

Note of abbreviation:
BOC: Board of Commissioners *BOD: Board of Directors*

To what extent do you see the following duty is fulfilled by Board of Commissioners (BOC)?

	Strongly Disagree ← → Strongly Agree					
BOC supervises the actions of BOD	1	2	3	4	5	6
BOC gives advice to BOD when required	1	2	3	4	5	6
BOC ensures that BOD complies with Articles of Association	1	2	3	4	5	6
BOC ensures that BOD complies with regulations having the force of law	1	2	3	4	5	6
BOC draws-up minutes of each BOC meeting	1	2	3	4	5	6
BOC ensures that BOD reads minutes from each BOC meeting	1	2	3	4	5	6

BOC creates an ethical environment	1	2	3	4	5	6
BOC ensures that BOD protects the interests of shareholders	1	2	3	4	5	6
BOC ensures that BOD protects the interests of stakeholders	1	2	3	4	5	6
BOC ensures that BOD applies a transparent system for the recruitment of executives other than members of the BOD	1	2	3	4	5	6
BOC establishes certain committees as needed (e.g. audit, compensation, nomination, remuneration, risk, etc.)	1	2	3	4	5	6

2.2: Duties of Independent Commissioners

These statements below associate with the degree to which employees see the fulfilment of the duties of independent commissioners in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

Note of abbreviation:
IC: Independent Commissioners

To what extent do you see the following duty is fulfilled by Independent Commissioners (IC)?

	Strongly Disagree ←					→ Strongly Agree
IC ensures that BOD defines business strategy of the company	1	2	3	4	5	6
IC ensures that company hires professional managers	1	2	3	4	5	6
IC ensures that company establishes communication reporting link	1	2	3	4	5	6
IC ensures that company establishes control system	1	2	3	4	5	6
IC ensures that company establishes audit system	1	2	3	4	5	6
IC ensures that company complies with regulations	1	2	3	4	5	6
IC ensures that company manages risk	1	2	3	4	5	6
IC ensures that company provides transparent financial reporting	1	2	3	4	5	6
IC ensures that company treats minority shareholders fairly and honestly	1	2	3	4	5	6
IC ensures that company discloses transactions that have conflicting interests	1	2	3	4	5	6
IC ensures that company organs are accountable	1	2	3	4	5	6

2.3: Duties of Audit Committee (AC)

These statements below associate with the degree to which employees see the fulfilment of the duties of audit committee in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

Note of abbreviation:
AC: Audit Committee

To what extent do you see the following duty is fulfilled by Audit Committee (AC)?

	Strongly Disagree ← → Strongly Agree					
AC oversees financial reports, ensuring they follow the Indonesian Accounting standard	1	2	3	4	5	6
AC monitors the external auditor's audit of financial report	1	2	3	4	5	6
AC monitors the process of managing risk	1	2	3	4	5	6
AC ensures that the report of internal auditor considers risk management	1	2	3	4	5	6
AC ensures that BOD complies with recommendations relating to risk management	1	2	3	4	5	6
AC creates disciplines and control which lessen the possibility the company being jeopardised	1	2	3	4	5	6
AC empowers internal audit	1	2	3	4	5	6
AC promotes adequate structures of internal control	1	2	3	4	5	6
AC improves the quality of financial disclosure and reporting	1	2	3	4	5	6
AC reviews the scope, accuracy, and cost-effectiveness of external audit	1	2	3	4	5	6
AC reviews the independence and objectivity of external auditor	1	2	3	4	5	6
AC acts as communication channel between external auditors and BOC	1	2	3	4	5	6
AC reviews the results of external audit	1	2	3	4	5	6

2.4: Duties of Board of Directors

These statements below associate with the degree to which employees see the fulfilment of the duties of board of directors in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent do you see the following duty is fulfilled by Board of Directors (BOD)?

	Strongly Disagree ← → Strongly Agree					
BOD defines strategy of the company	1	2	3	4	5	6
BOD manages the implementation of strategy of the company	1	2	3	4	5	6
BOD protects the interests of shareholders	1	2	3	4	5	6
BOD protects the interests of stakeholders	1	2	3	4	5	6
BOD complies with the Articles of Association of the Company	1	2	3	4	5	6
BOD complies with regulations having the force of law	1	2	3	4	5	6
BOD creates an ethical environment	1	2	3	4	5	6
BOD creates a proper human resource management function	1	2	3	4	5	6
BOD enforces codes of conduct	1	2	3	4	5	6
BOD establishes internal control systems to safeguard company assets	1	2	3	4	5	6
BOD draws-up minutes for each BOD meeting	1	2	3	4	5	6
BOD ensures that BOC reads minutes of BOD meetings	1	2	3	4	5	6
BOD advises the audit committee when to seek a second opinion on an accounting issue	1	2	3	4	5	6
BOD ensures that BOC has access to information about the company	1	2	3	4	5	6
BOD provides shareholders with full and accurate information about the company	1	2	3	4	5	6
BOD communicates with internal parties on items of corporate importance	1	2	3	4	5	6
BOD ensures transparency in the financial framework of the company	1	2	3	4	5	6

2.5: Duties of Internal Control Groups

These statements below associate with the degree to which employees see the fulfilment of the duties of internal control groups in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

Note of abbreviation:
ICG: Internal Control Group

To what extent do you see the following duty is fulfilled by Internal Control Group (ICG)?

	Strongly Disagree ← → Strongly Agree					
ICG creates policies to secure the assets of the company	1	2	3	4	5	6
ICG creates policies to increase the operational efficiency and effectiveness of the company	1	2	3	4	5	6
ICG develops the reliability and the comprehensiveness of accounting/financial information	1	2	3	4	5	6
ICG ensures compliance with applicable policies and regulatory requirements	1	2	3	4	5	6
ICG ensures substantive audit findings are elevated and resolved	1	2	3	4	5	6

2.6: Codes of Conduct

These statements below associate with the degree to which employees see the implementation of codes of conduct in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided.

To what extent do you see the following statement is fulfilled by your company?

My company has codes of conduct which	Strongly Disagree ← → Strongly Agree					
… create an environment where conflicts of interest are avoided or eliminated	1	2	3	4	5	6
… create an environment where people do not engage in insider trading for the benefit of individual interest	1	2	3	4	5	6
… make certain that no one engages in corrupt practices	1	2	3	4	5	6
… make certain that no one engages in activities that jeopardise the company's reputation	1	2	3	4	5	6
… treat all stakeholders fairly and honestly	1	2	3	4	5	6
… develop mechanisms where violations of company policy can be reported without fear of retribution	1	2	3	4	5	6
… create an environment in which the decisions of company's organs are obeyed	1	2	3	4	5	6

SECTION 3: ORGANISATIONAL PERFORMANCE

These statements below are associated with the degree to which employees see the improvement is needed in their company. Please express your opinion on each statement by giving a circle to the most appropriate number provided with the following scale:

1	2	3	4	5	6
Very Little	Little	Somewhat Little	Somewhat Much	Much	Very Much

In your opinion, to what degree does your organisation **need to improve** on the following performance criteria?

	Very Little ⟷ Very Much					
Efficiency	1	2	3	4	5	6
Customer satisfaction	1	2	3	4	5	6
Managerial behaviour	1	2	3	4	5	6
Professional behaviour	1	2	3	4	5	6
Service quality	1	2	3	4	5	6
Contact with clients	1	2	3	4	5	6
Position on the market	1	2	3	4	5	6
Reputation	1	2	3	4	5	6

SECTION 4: DEMOGRAPHIC AND FIRM CHARACTERISTICS

To help classify your answer, we would like to ask you few demographic questions. Again, your answer will be kept in strict confidence.

Gender ☐ Female ☐ Male

How old are you:
☐ Below 30 years old
☐ Between 30 to 40 years old
☐ Between 40+ to 50 years old
☐ Between 50+ to 60 years old
☐ Above 60 years old

How long have you been in this company?
☐ Less than 1 year
☐ Between 1 to 5 year
☐ Between 5+ to 10 year
☐ Between 10+ to 15 year
☐ Between 15+ to 20 year
☐ More than 20 year

Where do you spend your childhood (up to 10 years old)? Please, write the city and nation
City: ……..…. Nation: …….

How many hierarchical layers above your current position to top? _____

How many hierarchical layers below your current position to the lowest position? _____

What type of business your company is in?
☐ Service Business ☐ Manufacturing Business

What type of ownership your company is classified?
☐ Private Business ☐ Public/SOE Business

What department are you in?
☐ Finance/Accounting
☐ Marketing
☐ Production/Operation
☐ Human Resource Management
☐ Others

Thank you for your participation and cooperation

REQUEST FOR THE RESULT OF THIS STUDY

Do you want me to share the result of this study? ☐ Yes ☐ No

If **yes**, please provide your contact details:

Name of respondent: _____
Name of company: _____
Mailing address: _____
_____
_____
Post Code: _____
E-mail: _____
Phone: _____
Fax: _____

Delivery preference:
(please thick (√) in in the box provided) ☐ Print out (post mail) ☐ File (e-mail)

Appendix 3: Questionnaire in Bahasa Indonesia

No: _____

Peserta yang terhormat,

Daftar pertanyaan berikut ini disusun untuk mempelajari aspek budaya organisasi, tata kelola internal korporat dan kinerja pada perusahaan. Informasi yang anda berikan akan membantu saya memahami dengan lebih baik bagaimana organisasi dijalankan. Dikarenakan **anda** adalah seorang yang mampu memberi saya gambaran yang benar tentang bagaimana penyelenggaraan organisasi, maka saya memohon anda menanggapi pertanyaan dengan jujur dan terus terang.

Jawaban anda akan *sepenuhnya dirahasiakan*. Tidak seorang pun kecuali saya akan memiliki akses terhadap informasi yang anda berikan. Supaya kerahasiaan dapat dijamin sepenuhnya, nomer identifikasi disediakan untuk setiap peserta. Nomer ini hanya akan digunakan untuk tindakan lanjutan. Nomer, nama dan kuesioner tidak akan dilihat oleh orang lain selain saya.

Jika anda perlukan, ringkasan hasil akan dikirimkan kepada anda setelah data dianalisis.

Terimakasih banyak atas waktu dan kerjasama anda. Saya sangat menghargai organisasi dan bantuan anda dalam usaha penelitian ini.

Salam hangat,

Amin Wibowo
Peneliti

Alamat untuk Korespondensi

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PETUNJUK UMUM

- Tidak ada jawaban yang salah atau benar. Oleh karena itu, mohon menjawab pertanyaan sesuai pengetahuan anda dengan cara melingkari nomer jawaban yang paling sesuai.
- Contoh cara menjawab daftar pertanyaan:

	Sangat Tidak Setuju ⟷ Sangat Setuju					
Langit adalah biru	1	2	3	4	⑤	6

Dengan skala sebagai berikut:

1	2	3	4	5	6
Sangat Tidak Setuju	Tidak Setuju	Agak Tidak Setuju	Agak Setuju	Setuju	Sangat Setuju

Maka, dengan melingkari nomer 5, berarti anda menyatakan setuju pada pernyataan yang diberikan.

DEFINISI

Untuk keperluan studi ini, definisi berikut ini akan digunakan:

- ***Budaya Organisasi***: Cara tertentu untuk menjalankan fungsi organisasi yang telah dikembangkan dalam waktu yang panjang oleh sejarah, orang, kepentingan dan kegiatan organisasi, dan yang telah menjadi kebiasaan dalam organisasi itu (Wilderom and Van den Berg 2000).
- ***Tata Kelola Internal Korporat:*** Mekanisme dan kegiatan khusus yang dilakukan perusahaan secara individual untuk memperkuat pengendalian dan *akuntabilitas* (pertanggungjawaban*)* yang berpusat pada dewan komisaris, komisaris independen, komite audit, dewan direksi, satuan pengawasan internal, yang dalam menjalankan aktifitas-aktifitasnya mereka ini diperkuat dengan Pedoman Perilaku yang bertujuan memajukan perilaku yang pantas.
- ***Persepsi atas Kinerja:*** Tingkat perbaikan yang diperlukan perusahaan pada dimensi berikut: efisiensi, kepuasan konsumen, perilaku manajerial, perilaku profesional, kualitas pelayanan, hubungan dengan pelanggan, posisi di pasar, dan reputasi (Licht 2001).

BAGIAN 1: BUDAYA ORGANISASI

Sub Bagian 1.1: Otonomi

Pernyataan dibawah ini berhubungan dengan tingkat kebebasan karyawan dalam membuat keputusan di pekerjaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana hal berikut ini berlangsung di organisasi anda?

	Sangat Tidak Setuju ⟷ Sangat Setuju					
Ada ruang bagi karyawan non-manajerial untuk membuat keputusan sendiri	1	2	3	4	5	6
Untuk kepentingan perusahaan pada saat yang diperlukan, karyawan diperbolehkan untuk tidak mengikuti peraturan secara ketat	1	2	3	4	5	6
Ada kebebasan bagi karyawan untuk mengimplementasikan keputusan berdasarkan pandangan mereka	1	2	3	4	5	6
Karyawan mempengaruhi keputusan penting yang berhubungan dengan pekerjaan	1	2	3	4	5	6
Ada kebebasan bagi karyawan untuk merencanakan pekerjaan mereka sendiri	1	2	3	4	5	6
Ada kesempatan bagi karyawan untuk mengemukakan ide-ide sebelum keputusan diambil	1	2	3	4	5	6

Sub Bagian I.2: Orientasi Eksternal

Pernyataan di bawah ini berhubungan dengan sejauh mana karyawan melihat praktik hubungan antara organisasi dengan lingkungannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana hal berikut ini berlangsung di organisasi anda?

	Sangat Tidak Setuju ⟷ Sangat Setuju					
Ada reaksi yang cepat terhadap perkembangan yang terjadi pasar	1	2	3	4	5	6
Ada penelitian tentang keinginan dan kebutuhan pelanggan	1	2	3	4	5	6
Pelanggan baru dicari secara aktif	1	2	3	4	5	6
Perusahaan bekerja untuk memperbaiki posisi pasar	1	2	3	4	5	6
Ada pelatihan sungguh-sungguh bagi karyawan tentang cara mengumpulkan informasi secara sistematis mengenai apa yang diinginkan pelanggan untuk diperbaiki	1	2	3	4	5	6
Perusahaan lebih maju dibanding dengan pesaing lokal	1	2	3	4	5	6

Sub Bagian I.3: Koordinasi antar Departemen

Pernyataan di bawah ini berhubungan dengan sejauh mana karyawan melihat praktik hubungan antara departemennya dengan departemen lain dalam satu organisasi. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana hal berikut ini berlangsung di organisasi anda?

	Sangat Tidak Setuju ← → Sangat Setuju					
Ada kerjasama yang bermanfaat antar departemen	1	2	3	4	5	6
Ada pertukaran informasi yang bermanfaat antar departemen	1	2	3	4	5	6
Departemen-departemen saling membantu dalam menyelesaikan masalah	1	2	3	4	5	6
Kepala departemen saling berkomunikasi satu sama lain	1	2	3	4	5	6
Bekerja dengan seseorang dari bagian lain perusahaan ini, seperti bekerja dengan seseorang dari perusahaan lain	1	2	3	4	5	6
Pekerjaan diatur supaya setiap orang dapat melihat hubungan antara pekerjaannya dan tujuan-tujuan perusahaan	1	2	3	4	5	6
Kerjasama antara bagian perusahaan yang berbeda dianjurkan secara aktif	1	2	3	4	5	6

Sub Bagian I.4: Manajemen Sumberdaya Manusia

Pernyataan di bawah ini berhubungan dengan sejauh mana karyawan melihat praktik manajemen sumberdaya manusia di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana hal berikut ini berlangsung di organisasi anda?

	Sangat Tidak Setuju ← → Sangat Setuju					
Penilaian kinerja dilakukan secara sungguh-sungguh	1	2	3	4	5	6
Karyawan memperoleh informasi yang berguna mengenai fungsinya dalam perusahaan	1	2	3	4	5	6
Karyawan baru diseleksi dengan hati-hati	1	2	3	4	5	6
Kompetensi melaksanakan pekerjaan adalah satu-satunya kriteria dalam merekrut karyawan baru	1	2	3	4	5	6
Karyawan diberitahu jika pekerjaan mereka baik	1	2	3	4	5	6
Manajer membantu karyawan yang baik untuk maju	1	2	3	4	5	6
Tidak banyak perhatian tentang masalah pribadi karyawan	1	2	3	4	5	6

Sub Bagian I.5: Orientasi Perbaikan

Pernyataan di bawah ini berhubungan dengan sejauh mana karyawan melihat praktik orientasi perbaikan di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana hal berikut ini berlangsung di organisasi anda?

	Sangat Tidak Setuju ⟷ Sangat Setuju					
Karyawan memeriksa dengan teliti cara bekerja mereka sendiri	1	2	3	4	5	6
Karyawan mencari kemungkinan-kemungkinan untuk memperbaiki organisasi	1	2	3	4	5	6
Karyawan mengambil inisiatif untuk memperbaiki cara kerja	1	2	3	4	5	6
Cara bekerja yang baru dan yang lebih baik selalu diambil	1	2	3	4	5	6
Karyawan berusaha menjadi pelopor	1	2	3	4	5	6
Orang berusaha bekerja semaksimal mungkin	1	2	3	4	5	6
Berpikir tiga tahun ke depan atau lebih	1	2	3	4	5	6

BAGIAN 2: TATA KELOLA INTERNAL KORPORAT

Sub Bagian 2.1: Tugas Dewan Komisaris

Pernyataan dibawah ini berhubungan dengan sejauh mana karyawan melihat pemenuhan tugas dewan komisaris di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana anda melihat tugas-tugas berikut dipenuhi oleh Dewan Komisaris (DK)?

Catatan singkatan istilah: *DK: Dewan Komisaris DD: Dewan Direksi*	Sangat Tidak Setuju ⟷ Sangat Setuju					
DK mengawasi tindakan DD	1	2	3	4	5	6
DK memberikan nasehat kepada DD ketika diperlukan	1	2	3	4	5	6
DK memastikan bahwa DD patuh terhadap akta pendirian perusahaan	1	2	3	4	5	6
DK memastikan bahwa DD patuh terhadap peraturan yang memiliki kekuatan hukum	1	2	3	4	5	6
DK membuat laporan rapat untuk setiap rapat DK	1	2	3	4	5	6
DK memastikan bahwa DD menerima salinan laporan rapat DK	1	2	3	4	5	6
DK menciptakan lingkungan yang etis	1	2	3	4	5	6
DK memastikan bahwa DD melindungi kepentingan pemegang saham	1	2	3	4	5	6
DK memastikan bahwa DD melindungi kepentingan pemangku kepentingan/*stakeholders*	1	2	3	4	5	6

DK memastikan bahwa DD menerapkan sistem yang transparan untuk merekrut eksekutif selain dari anggota DD	1	2	3	4	5	6
DK membentuk komite tertentu jika diperlukan (contoh: komite audit, kompensasi, nominasi, renumerasi, risiko dan lainnya)	1	2	3	4	5	6

Sub Bagian 2.2: Tugas Komisaris Independen

Pernyataan dibawah ini berhubungan dengan sejauh mana karyawan melihat pemenuhan tugas komisaris independen di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana anda melihat tugas-tugas berikut dipenuhi oleh Komisaris Independen (KI)?

Catatan singkatan istilah *KI: Komisaris Independen* *DD: Dewan Direksi*	Sangat Tidak Setuju ← → Sangat Setuju					
KI memastikan bahwa DD menetapkan strategi bisnis perusahaan	1	2	3	4	5	6
KI memastikan bahwa perusahaan memperkerjakan manajer yang profesional	1	2	3	4	5	6
KI memastikan bahwa perusahaan membentuk jalur laporan komunikasi	1	2	3	4	5	6
KI memastikan bahwa perusahaan membentuk sistem pengawasan	1	2	3	4	5	6
KI memastikan bahwa perusahaan membentuk sistem audit	1	2	3	4	5	6
KI memastikan bahwa perusahaan mematuhi hukum dan perundangan yang berlaku	1	2	3	4	5	6
KI memastikan bahwa perusahaan mengelola risiko	1	2	3	4	5	6
KI memastikan bahwa perusahaan menyediakan laporan keuangan yang transparan	1	2	3	4	5	6
KI memastikan bahwa perusahaan memperlakukan pemegang saham minoritas dengan adil dan jujur	1	2	3	4	5	6
KI memastikan bahwa perusahaan mengungkapkan transaksi yang memiliki benturan kepentingan	1	2	3	4	5	6
KI memastikan akuntabilitas organ perusahaan	1	2	3	4	5	6

Sub Bagian 2.3: Tugas Komite Audit

Pernyataan dibawah ini berhubungan dengan tingkat sejauh mana karyawan melihat pemenuhan tugas komite audit di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana anda melihat tugas-tugas berikut dipenuhi oleh Komite Audit (KA)?

Catatan singkatan istilah: *KA: Komite Audit* *DD: Dewan Direksi* *DK: Dewan Komisaris*	Sangat Tidak Setuju ← → Sangat Setuju					
KA memastikan bahwa laporan keuangan sesuai standar akuntansi Indonesia	1	2	3	4	5	6
KA mengawasi audit laporan keuangan yang dilakukan oleh auditor eksternal	1	2	3	4	5	6
KA mengawasi proses pengelolaan risiko	1	2	3	4	5	6
KA memastikan bahwa laporan auditor internal mempertimbangkan manajemen risiko	1	2	3	4	5	6
KA memastikan bahwa DD mematuhi rekomendasi yang berkaitan dengan manajemen risiko	1	2	3	4	5	6
KA menciptakan iklim disiplin dan kontrol yang akan mengurangi kemungkinan penyelewengan	1	2	3	4	5	6
KA memberdayakan audit internal	1	2	3	4	5	6
KA memajukan struktur yang memadai untuk pengawasan internal	1	2	3	4	5	6
KA memperbaiki kualitas pengungkapan dan pelaporan keuangan	1	2	3	4	5	6
KA meninjau ulang jangkauan, keakuratan, dan efektifitas biaya audit eksternal	1	2	3	4	5	6
KA meninjau ulang independensi dan objektifitas auditor eksternal	1	2	3	4	5	6
KA berperan sebagai saluran komunikasi antara auditor eksternal dan DK	1	2	3	4	5	6
KA meninjau laporan audit eksternal	1	2	3	4	5	6

Sub Bagian 2.4: Tugas Dewan Direksi

Pernyataan dibawah ini berhubungan dengan sejauh mana karyawan melihat pemenuhan tugas-tugas dewan direksi di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana anda melihat tugas-tugas berikut dipenuhi oleh Dewan Direksi (DD)?

Catatan singkatan istilah: *DD: Dewan Direksi* *DK: Dewan Komisaris*	Sangat Tidak Setuju ← → Sangat Setuju					
DD menetapkan strategi perusahaan	1	2	3	4	5	6
DD mengelola implementasi strategi perusahaan	1	2	3	4	5	6
DD melindungi kepentingan pemegang saham	1	2	3	4	5	6
DD melindungi kepentingan pemangku kepentingan/*stakeholder*	1	2	3	4	5	6
DD mematuhi akta pendirian perusahaan	1	2	3	4	5	6
DD mematuhi peraturan yang memiliki kekuatan hukum	1	2	3	4	5	6
DD menciptakan lingkungan yang etis	1	2	3	4	5	6
DD menciptakan fungsi sumber daya manusia yang memadai	1	2	3	4	5	6
DD melaksanakan Pedoman Perilaku	1	2	3	4	5	6
DD membentuk sistem pengawasan internal untuk melindungi aktiva perusahaan	1	2	3	4	5	6
DD membuat laporan rapat untuk setiap rapat DD	1	2	3	4	5	6
DD memastikan bahwa DK menerima salinan laporan rapat DD	1	2	3	4	5	6
DD memberi masukan komite audit manakala mencari opini kedua yang berkaitan dengan isu akuntansi	1	2	3	4	5	6
DD memastikan bahwa DK mempunyai akses terhadap informasi perusahaan	1	2	3	4	5	6
DD menyediakan informasi yang lengkap dan akurat tentang perusahaan kepada pemilik saham	1	2	3	4	5	6
DD berkomunikasi dengan pihak internal tentang hal-hal yang penting untuk perusahaan	1	2	3	4	5	6
DD memastikan adanya transparansi dalam kerangka keuangan perusahaan	1	2	3	4	5	6

Sub Bagian 2.5: Tugas Satuan Pengawasan Internal

Pernyataan dibawah ini berhubungan dengan sejauh mana karyawan melihat pemenuhan tugas satuan pengawasan internal di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat.

Sejauh mana anda melihat tugas berikut dipenuhi oleh Satuan Pengawas Internal (SPI)?

Catatan singkatan istilah: *SPI: Satuan Pengawasan Internal*	Sangat Tidak Setuju ↔ Sangat Setuju					
SPI menciptakan kebijaksanaan untuk melindungi aktiva perusahaan	1	2	3	4	5	6
SPI menciptakan kebijaksanaan untuk meningkatkan efisiensi dan efektifitas operasional perusahaan	1	2	3	4	5	6
SPI mengembangkan keandalan dan kelengkapan informasi akuntansi/keuangan	1	2	3	4	5	6
SPI memastikan kepatuhan perusahaan terhadap persyaratan kebijakan dan peraturan yang berlaku	1	2	3	4	5	6
SPI memastikan temuan audit yang substantip diangkat dan dipecahkan	1	2	3	4	5	6

Sub Bagian 2.6: Pedoman Perilaku

Pernyataan dibawah ini berhubungan dengan sejauh mana karyawan melihat implementasi Pedoman Perilaku di perusahaannya. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat..

Sejauh mana anda melihat pernyataan berikut dipenuhi oleh perusahaan anda?

Perusahaan saya memiliki Pedoman Perilaku yang	Sangat Tidak Setuju ↔ Sangat Setuju					
… menciptakan lingkungan dimana benturan kepentingan dihindari atau dikurangi	1	2	3	4	5	6
… menciptakan lingkungan dimana orang tidak melibatkan diri pada perdagangan orang dalam (*insider trading*) untuk memperoleh keuntungan pribadi	1	2	3	4	5	6
… memastikan bahwa siapapun tidak menjalankan praktik korupsi	1	2	3	4	5	6
… memastikan bahwa siapapun tidak menjalankan aktifitas yang membahayakan reputasi perusahaan.	1	2	3	4	5	6
… memperlakukan semua pemangku kepentingan/*stakeholder* secara adil dan jujur	1	2	3	4	5	6
… mengembangkan mekanisme dimana pelanggaran atas kebijakan perusahaan dapat dilaporkan tanpa takut akan balas dendam	1	2	3	4	5	6
… menciptakan lingkungan untuk menghormati keputusan organ perusahaan	1	2	3	4	5	6

BAGIAN 3: KINERJA ORGANISATIONAL

Pernyataan dibawah ini berhubungan dengan sejauh mana karyawan merasa perbaikan diperlukan dalam perusahaan mereka. Silakan memberikan opini dengan cara melingkari nomer jawaban yang dianggap paling tepat dengan menggunakan skala sebagai berikut:

1	2	3	4	5	6
Sangat Sedikit	Sedikit	Agak Sedikit	Agak Banyak	Banyak	Sangat Banyak

Menurut anda, sejauh mana perusahaan anda **perlu memperbaiki** kriteria kinerja berikut ini?

	Sangat Sedikit ← → Sangat Banyak					
Efisiensi	1	2	3	4	5	6
Kepuasan Pelanggan	1	2	3	4	5	6
Perilaku manajerial	1	2	3	4	5	6
Perilaku profesional	1	2	3	4	5	6
Kualitas pelayanan	1	2	3	4	5	6
Hubungan dengan Pelanggan	1	2	3	4	5	6
Posisi di pasar	1	2	3	4	5	6
Reputasi	1	2	3	4	5	6

BAGIAN 4: KHARAKTERISTIK DEMOGRAPHI DAN PERUSAHAAN

Untuk mempermudah klasifikasi jawaban anda, saya ingin menanyakan beberapa pertanyaan tentang demographi dan perusahaan. Sekali lagi, jawaban anda akan sepenuhnya dirahasiakan.

Jenis Kelamin ☐ Wanita ☐ Pria

Berapa usia anda:
☐ Di bawah 30 tahun
☐ Di antara 30 sampai dengan 40 tahun
☐ Di antara 40+ sampai dengan 50 tahun
☐ Di antara 50+ sampai dengan 60 tahun
☐ Di atas 60 tahun

Berapa lama anda bekerja di perusahaan ini?
☐ Belum sampai 1 tahun
☐ Di antara 1 sampai dengan 5 tahun
☐ Di antara 5+ sampai dengan 10 tahun
☐ Di antara 10+ sampai dengan 15 tahun
☐ Di antara 15+ sampai dengan 20 tahun
☐ Lebih dari 20 tahun

Dimana anda menghabiskan masa kecil anda (sampai dengan usia 10 tahun)? Silakan, tulis kota dan Negara.

Kota:……. Negara: ……..

Ada berapa jenjang hirarki di atas posisi anda sekarang? _____

Ada berapa jenjang hirarki di bawah posisi anda sekarang? _____

Apa jenis usaha perusahaan anda?
☐ Jasa ☐ Manufaktur ☐ Lainnya

Perusahaan tempat anda bekerja adalah:
☐ Perusahaan Privat ☐ Perusahaan Publik/BUMN

Dalam departemen apa anda bekerja?
☐ Keuangan/Akuntansi
☐ Pemasaran
☐ Produksi/Operasi
☐ Sumberdaya Manusia
☐ Lainnya_____

Terima kasih atas partisipasi dan kerjasama anda

PERMINTAAN HASIL PENELITIAN

Saya berminat untuk mengetahui hasil dari survey ini. Silakan kirim kepada:

Nama: _____

Perusahaan: _____

Alamat Surat:_____

_____

_____

Kode Pos: _____

E-mail: _____

Telepone: _____

Fax: _____

Pilihan hasil survey:
(beri tanda (√) dalam salah satu nomer jawaban) ☐ Tercetak (via pos) ☐ File (e-mail)

Appendix 4: Output of Factor Analysis

A. Autonomy Construct

Correlation Matrix

There were six pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.A.1: Correlation Matrix–Autonomy (Auto)

Coefficient Correlation	Pairs
.351	Auto1 and Auto3
.336	Auto3 and Auto4
.304	Auto3 and Auto5
.393	Auto4 and Auto5
.396	Auto4 and Auto6
.450	Auto5 and Auto6

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, appropriateness of factor analysis was deduced.

Table 4.A.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA)–Autonomy (Auto)

		auto1	auto2	auto3	auto4	auto5	auto6
Anti-image Correlation	**auto1**	.793(a)	-0.108	-0.243	-0.057	-0.069	-0.117
	auto2	-0.108	.842(a)	-0.117	-0.046	-0.052	-0.046
	auto3	-0.243	-0.117	.766(a)	-0.210	-0.150	-0.006
	auto4	-0.057	-0.046	-0.210	.782(a)	-0.199	-0.248
	auto5	-0.069	-0.052	-0.150	-0.199	.771(a)	-0.307
	auto6	-0.117	-0.046	-0.006	-0.248	-0.307	.749(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.A.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)–Autonomy (Auto)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.775
Bartlett's Test of Sphericity	Approx. Chi-Square	451.023
	Df	15
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.A.4: Communalities–Autonomy (Auto)

Indicator	Initial	Extraction
Auto1	1.000	.721
Auto2	1.000	.999
Auto3	1.000	.631
Auto4	1.000	.565
Auto5	1.000	.620
Auto6	1.000	.662

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 40.573% of the variance.

Table 4.A.5: Total Variance Explained-Eigenvalues–Autonomy (Auto)

Component	Total	% of Variance	Cumulative %
1	2.434	40.573	40.573

Scree Plotting

Factor 1, with an Eigenvalue of 2.434, explained 40.573% of the variance.

Component Matrix

As four (4) pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two or more factors emerged, rotation was necessary.

Table 4.A.6: Component Matrix–Autonomy (Auto)

	Component		
	1	2	3
Auto1	.591	.350	-.499
Auto2	.428	.675	.600
Auto3	.658	.254	-.366
Auto4	.706	-.254	.044
Auto5	.709	-.311	.142
Auto6	.684	-.384	.213

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 3 pure indicators with loadings above 0.3 in factor one, none complex indicators with loadings of more than 0.3 in two or more factors.

Table 4.A.7: Rotated Component Matrix–Autonomy (Auto)

	Component		
	1	2	3
Auto1	.117	.838	.068
Auto2	.105	.132	.985
Auto3	.261	.742	.110
Auto4	.702	.263	.050
Auto5	.764	.172	.077
Auto6	.807	.077	.067

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.A.8: The Highest Reliability Score–Autonomy (Auto)

Correlation Matrix				
	Auto3	**Auto4**	**Auto5**	**Auto6**
Auto3	1.000			
Auto4	.336	1.000		
Auto5	.304	.393	1.000	
Auto6	.201	.396	.450	1.000

Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Auto3	12.9877	6.805	.397	.675
Auto4	12.3429	6.487	.515	590
Auto5	12.0094	6.707	.510	.594
Auto6	11.3912	7.620	.476	.624

Number of Items	**Cronbach's Alpha**
4	0.686

All but one of the inter-item correlations were above the threshold of 0.3; two out of four item-to-total correlations had values higher than the benchmark of 0.5; and Cronbach's alpha was above 0.60. The results of the reliability analysis were satisfactory.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.A.9: Construct Validity–Autonomy (Auto)

Indicator		
Auto3	Correlation Coefficient Sig. (2-tailed) N	.693** .000 496
Auto4	Correlation Coefficient Sig. (2-tailed) N	.739** .000 496
Auto5	Correlation Coefficient Sig. (2-tailed) N	.729** .000 496
Auto6	Correlation Coefficient Sig. (2-tailed) N	.636** .000 496

In conclusion, the indicators Auto3, Auto4, Auto5, and Auto6 summarised the most essential information contained in the construct Autonomy, which originally consisted of 6 indicators.

B. External Orientation Construct

Correlation Matrix

There were fifteen pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analyses.

Table 4.B.1: Correlation Matrix–External Orientation (EO)

Coefficient of Correlation	Pairs
.483	EO1-EO2
.564	EO1-EO3
.470	EO1-EO4
.492	EO1-EO5
.536	EO1-EO6
.598	EO2-EO3
.525	EO2-EO4
.586	EO2-EO5
.472	EO2-EO6
.644	EO3-EO4
.529	EO3-EO5
.490	EO3-EO6
.440	EO4-EO5
.446	EO4-EO6
.475	EO5-EO6

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, appropriateness of factor analysis was inferred.

Table 4.B.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –External Orientation (EO)

		eo1	eo2	eo3	eo4	eo5	eo6
Anti-image Correlation	**eo1**	.889(a)	-0.030	-0.251	-0.072	-0.196	-0.250
	eo2	-0.030	.872(a)	-0.280	-0.095	-0.329	-0.150
	eo3	-0.251	-0.280	.839(a)	-0.414	-0.117	-0.041
	eo4	-0.072	-0.095	-0.414	.869(a)	-0.052	-0.137
	eo5	-0.196	-0.329	-0.117	-0.052	.886(a)	-0.120
	eo6	-0.250	-0.150	-0.041	-0.137	-0.120	.907(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability is deduced.

Table 4.B.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – External Orientation (EO)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	1307.192
	Df	15
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.B.4: Communalities–External Orientation (EO)

Indicator	Initial	Extraction
EO1	1.000	.682
EO2	1.000	.776
EO3	1.000	.802
EO4	1.000	.875
EO5	1.000	.839
EO6	1.000	.858

Total Variance Explained

One factor had an Eigenvalue above 1.0 and explained 60.867% of variance.

Table 4.B.5: Total Variance Explained-Eigenvalues–External Orientation (EO)

Component	Total	% of Variance	Cumulative %
1	3.652	60.867	60.867

Scree Plotting

Factor 1, with an Eigenvalue 3.652, explained 60.867% of the variance.

Component Matrix

As four (4) pure indicators with loadings greater than 0.3 were found in factor one and two (2) complex indicators with loadings more than 0.3 in two factors emerged, rotation was necessary.

Table 4.B.6: Component Matrix–External Orientation (EO)

	Component		
	1	2	3
EO1	.768	.255	.163
EO2	.800	-.112	-.352
EO3	.843	-.284	.103
EO4	.769	-.405	.346
EO5	.774	.084	-.483
EO6	.722	.526	.244

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there was 1 pure indicator with a loading above 0.3 in factor one, 1 pure indicator with a loading above 0.3 in factor two, 1 pure indicator with a loading above 0.3 in factor three, 3 complex indicators with loadings of more than 0.3 in two or more factors.

Table 4.B.7: Rotated Component Matrix–External Orientation (EO)

	Component		
	1	2	3
EO1	.321	.361	.670
EO2	.763	.383	.216
EO3	.428	.734	.283
EO4	.193	.882	.244
EO5	.847	.178	.300
EO6	.221	.192	.879

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, a process of deleting indicators was applied based on the highest possible Cronbach's alpha if the items was to be deleted.

Table 4.B.8: The Highest Reliability Score–External Orientation (EO)

Correlation Matrix				
	EO2	**EO3**	**EO4**	**EO5**
EO2	1.000			
EO3	.625	1.000		
EO4	.518	.662	1.000	
EO5	.606	.553	.467	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
EO2	13.3937	8.449	.697	.788
EO3	13.2555	8.244	.734	.771
EO4	13.0822	9.428	.641	.814
EO5	13.7744	8.412	.635	.818

Number of Items	**Cronbach's Alpha**
4	.841

Inter-item correlations were all above the threshold of 0.3; four item-to-total correlations had values higher than the benchmark of 0.5; and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.B.9: Construct Validity–External Orientation (EO)

Indicator		
EO2	Correlation Coefficient Sig. (2-tailed) N	.825** .000 496
EO3	Correlation Coefficient Sig. (2-tailed) N	.825** .000 496
EO4	Correlation Coefficient Sig. (2-tailed) N	.746** .000 496
EO5	Correlation Coefficient Sig. (2-tailed) N	.812** .000 496

In conclusion, the indicators EO2, EO3, EO4, and EO5 summarised the most essential information contained in the External Orientation construct, which originally consisted of 6 indicators.

C. Inter-departmental Coordination Construct

Correlation Matrix

There were fifteen pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.C.1: Correlation Matrix–Inter-departmental Coordination (IDC)

Coefficient of Correlation	Pairs
.811	IDC1-IDC2
.664	IDC1-IDC3
.652	IDC1-IDC4
.499	IDC1-IDC6
.448	IDC1-IDC7
.686	IDC2-IDC3
.647	IDC2-IDC4
.514	IDC2-IDC6
.442	IDC2-IDC7
.730	IDC3-IDC4
.558	IDC3-IDC6
.453	IDC3-IDC7
.552	IDC4-IDC6
.460	IDC4-IDC7
.507	IDC6-IDC7

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Table 4.C.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Inter-departmental Coordination (IDC)

		idc1	idc2	idc3	idc4	idc5	idc6	idc7
Anti-image Correlation	**idc1**	.834(a)	-0.599	-0.114	-0.173	-0.044	-0.028	-0.102
	idc2	-0.599	.827(a)	-0.252	-0.099	-0.033	-0.053	0.013
	idc3	-0.114	-0.252	.893(a)	-0.354	-0.022	-0.203	-0.089
	idc4	-0.173	-0.099	-0.354	.907(a)	0.000	-0.160	-0.096
	idc5	-0.044	-0.033	-0.022	0.000	.888(a)	0.061	-0.053
	idc6	-0.028	-0.053	-0.203	-0.160	0.061	.907(a)	-0.272
	idc7	-0.102	0.013	-0.089	-0.096	-0.053	-0.272	.915(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability is inferred.

Table 4.C.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Inter-departmental Coordination (IDC)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	1816.182
	Df	21
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.C.4: Communalities–Inter-departmental Coordination (IDC)

Indicator	Initial	Extraction
IDC1	1.000	.823
IDC2	1.000	.842
IDC3	1.000	.770
IDC4	1.000	.724
IDC5	1.000	.993
IDC6	1.000	.693
IDC7	1.000	.840

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 56.979% of the variance.

Table 4.C.5: Total Variance Explained-Eigenvalues–Inter-departmental Coordination (IDC)

Component	Total	% of Variance	Cumulative %
1	3.989	56.979	56.979

Scree Plotting

Factor 1, with an Eigenvalue of 3.989, explained 56.979% of the variance.

Component Matrix

As four (4) pure indicators with loadings more than 0.3 were found in one factor, and two (2) complex indicators with loadings more than 0.3 in two factors emerged, rotation was necessary.

Table 4.C.6: Component Matrix–Inter-departmental Coordination (IDC)

	Component		
	1	2	3
IDC1	.864	.028	-.275
IDC2	.864	.022	-.310
IDC3	.869	-.036	-.113
IDC4	.844	-.051	-.098
IDC5	.183	.976	.087
IDC6	.742	-.164	.339
IDC7	.667	-.038	.628

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 2 pure indicators with loadings above 0.3 in one factor, 3 complex indicators with loadings of more than 0.3 in two factors.

Table 4.C.7: Rotated Component Matrix–Inter-departmental Coordination (IDC)

	Component		
	1	2	3
IDC1	.876	.220	.085
IDC2	.895	.191	.075
IDC3	.796	.368	.039
IDC4	.766	.369	.022
IDC5	.079	.035	.993
IDC6	.451	.697	-.055
IDC7	.228	.883	.091

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.C.8: The Highest Reliability Score–Inter-departmental Coordination (IDC)

Correlation Matrix				
	IDC1	**IDC2**	**IDC3**	**IDC4**
IDC1	1.000			
IDC2	.820	1.000		
IDC3	.688	.713	1.000	
IDC4	.666	.658	.720	1.000

Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
IDC1	13.9709	6.602	.810	.873
IDC2	14.0165	6.671	.819	.870
IDC3	14.1983	5.519	.786	.882
IDC4	14.0544	6.893	.750	.894

Number of Items	**Cronbach's Alpha**
4	.907

Inter-item correlations were above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.C.9: Construct Validity–Inter-departmental Coordination (IDC)

Indicator		
IDC1	Correlation Coefficient Sig. (2-tailed) N	.877*** .000 496
IDC2	Correlation Coefficient Sig. (2-tailed) N	.876** .000 496
IDC3	Correlation Coefficient Sig. (2-tailed) N	.878** .000 496
IDC4	Correlation Coefficient Sig. (2-tailed) N	.855** .000 496

In conclusion, the indicators IDC1, IDC2, IDC3, and IDC4 summarised the most essential information contained in the Inter-departmental Coordination construct, which originally consisted of 7 indicators.

D. Human Resource Management Construct

Correlation Matrix

There were fifteen pairs with a correlation above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.D.1: Correlation Matrix–Human Resource Management (HRM)

Coefficient of Correlation	Pairs
.729	HRM1-HRM2
.521	HRM1-HRM3
.359	HRM1-HRM4
.582	HRM1-HRM5
.580	HRM1-HRM6
.563	HRM2-HRM3
.323	HRM2-HRM4
.626	HRM2-HRM5
.596	HRM2-HRM6
.397	HRM3-HRM4
.518	HRM3-HRM5
.482	HRM3-HRM6
.349	HRM4-HRM5
358	HRM4-HRM6
.721	HRM5-HRM6

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, factor analysis was deemed appropriate.

Table 4.D.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Human Resource Management (HRM)

		hrm1	hrm2	hrm3	hrm4	hrm5	hrm6	hrm7
Anti-image Correlation	hrm1	.835(a)	-0.518	-0.110	-0.114	-0.080	-0.134	-0.097
	hrm2	-0.518	.820(a)	-0.209	0.059	-0.207	-0.100	0.049
	hrm3	-0.110	-0.209	.903(a)	-0.239	-0.100	-0.069	-0.078
	hrm4	-0.114	0.059	-0.239	.881(a)	-0.077	-0.072	0.026
	hrm5	-0.080	-0.207	-0.100	-0.077	.836(a)	-0.504	0.022
	hrm6	-0.134	-0.100	-0.069	-0.072	-0.504	.841(a)	-0.045
	hrm7	-0.097	0.049	-0.078	0.026	0.022	-0.045	.789(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.D.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Human Resource Management (HRM)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.846
Bartlett's Test of Sphericity	Approx. Chi-Square	1424.208
	Df	21
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.D.4: Communalities–Human Resource Management (HRM)

	Initial	Extraction
HRM1	1.000	.715
HRM2	1.000	.759
HRM3	1.000	.595
HRM4	1.000	.939
HRM5	1.000	.721
HRM5	1.000	.690
HRM6	1.000	.994

Total Variance Explained

One factor had an Eigenvalue above 1.0, and this explained 51.866% of variance.

Table 4.D.5: Total Variance Explained-Eigenvalues–Human Resource Management (HRM)

Component	Total	% of Variance	Cumulative %
1	3.631	51.866	51.866

Scree Plotting

Factor 1, with an Eigenvalue 3.631, explained 51.866% of the variance.

Component Matrix

As six (6) pure indicators with loadings of more than 0.3 in one factor were found, and 1 complex indicator with a loading of more than 0.3 in two factor was revealed, rotation was necessary.

Table 4.D.6: Component Matrix–Human Resource Management (HRM)

	Component		
	1	2	3
HRM1	.833	.017	-.144
HRM2	.839	-.056	-.230
HRM3	.744	.020	.203
HRM4	.547	-.120	.791
HRM5	.827	-.088	-.173
HRM6	.811	-.045	-.172
HRM7	.197	.975	.058

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 5 pure indicators with loadings above 0.3 in one factor, and 1 complex indicator with a loading of more than 0.3 in two factors.

Table 4.D.7: Rotated Component Matrix–Human Resource Management (HRM)

	Component		
	1	2	3
HRM1	.816	.190	.109
HRM2	.862	.121	.032
HRM3	.597	.472	.124
HRM4	.196	.949	.000
HRM5	.832	.171	.003
HRM6	.813	.162	.044
HRM7	.072	.025	.994

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.D.8: The Highest Reliability Score–Human Resource Management (HRM)

Correlation Matrix				
	HRM1	**HRM2**	**HRM5**	**HRM6**
HRM1	1.000			
HRM2	.740	1.000		
HRM5	.584	.624	1.000	
HRM6	.577	.586	.719	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
HRM1	12.6155	9.322	.725	.844
HRM2	12.4119	10.247	.757	.828
HRM5	12.5289	10.130	.733	.837
HRM6	12.3327	10.639	.715	.845

Number of Items	**Cronbach's Alpha**
4	.874

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.D.9: Construct Validity–Human Resource Management (HRM)

Indicator		
HRM1	Correlation Coefficient Sig. (2-tailed) N	.864** .000 496
HRM2	Correlation Coefficient Sig. (2-tailed) N	.858** .000 496
HRM5	Correlation Coefficient Sig. (2-tailed) N	.845** .000 496
HRM6	Correlation Coefficient Sig. (2-tailed) N	.829** .000 496

In conclusion, the indicators HRM1, HRM2, HRM5, and HRM6 summarised the most essential information contained in the Human Resource Management construct, which originally consisted of 7 indicators.

E. Improvement Orientation Construct

Correlation Matrix

There were twenty-one pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.E.1: Correlation Matrix–Improvement Orientation (IO)

Coefficient of Correlation	Pairs
.497	IO1-IO2
.504	IO1-IO3
.485	IO1-IO4
.416	IO1-IO5
.515	IO1-IO6
.432	IO1-IO7
.625	IO2-IO3
.564	IO2-IO4
.546	IO2-IO5
.463	IO2-IO6
.444	IO2-IO7
.675	IO3-IO4
.630	IO3-IO5
.582	IO3-IO6
.506	IO3-IO7
.651	IO4-IO5
.614	IO4-IO6
.547	IO4-IO7
.589	IO5-IO6
.571	IO5-IO7
.634	IO6-IO7

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Thus, the appropriateness of factor analysis was inferred.

Table 4.E.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Improvement Orientation (IO)

		io1	io2	io3	io4	io5	io6	io7
Anti-image Correlation	**io1**	.915(a)	-0.238	-0.100	-0.037	0.036	-0.205	-0.065
	io2	-0.238	.897(a)	-0.296	-0.160	-0.124	0.041	-0.022
	io3	-0.100	-0.296	.904(a)	-0.241	-0.210	-0.129	-0.013
	io4	-0.037	-0.160	-0.241	.911(a)	-0.267	-0.186	-0.133
	io5	0.036	-0.124	-0.210	-0.267	.912(a)	-0.155	-0.191
	io6	-0.205	0.041	-0.129	-0.186	-0.155	.889(a)	-0.355
	io7	-0.065	-0.022	-0.013	-0.133	-0.191	-0.355	.902(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.E.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Improvement Orientation (IO)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	1775.148
	Df	21
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.E.4: Communalities–Improvement Orientation (IO)

Indicator	Initial	Extraction
IO1	1.000	.956
IO2	1.000	.809
IO3	1.000	.761
IO4	1.000	.745
IO5	1.000	.752
IO6	1.000	.784
IO7	1.000	.801

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 61.120% of variance.

Table 4.E.5: Total Variance Explained-Eigenvalues–Improvement Orientation (IO)

Component	Total	% of Variance	Cumulative %
1	4.278	61.120	61.120

Scree Plotting

Factor 1, with an Eigenvalue 4.278, explained 61.120% of the variance.

Component Matrix

As five pure indicators with loadings of more than 0.3 were found in one factor and two (2) complex indicators with loadings of more than 0.3 emerged in two or more factor, rotation was necessary.

Table 4.E.6: Component Matrix–Improvement Orientation (IO)

	Component		
	1	2	3
IO1	.664	.509	.506
IO2	.749	.409	-.286
IO3	.822	.120	-.266
IO4	.839	-.098	-.177
IO5	.816	-.204	-.212
IO6	.809	-.244	.266
IO7	.759	-.392	.267

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 5 complex indicators with loading above 0.3 in two factors.

Table 4.E.7: Rotated Component Matrix–Improvement Orientation (IO)

	Component		
	1	2	3
IO1	.256	.256	.908
IO2	.819	.110	.355
IO3	.768	.361	.202
IO4	.654	.551	.121
IO5	.630	.596	.019
IO6	.290	.781	.301
IO7	.211	.850	.185

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.E.8: The Highest Reliability Score–Improvement Orientation (IO)

Correlation Matrix				
	IO3	**IO4**	**IO5**	**IO6**
IO3	1.000			
IO4	.660	1.000		
IO5	.631	.667	1.000	
IO6	.576	.623	.602	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
IO3	12.4923	8.250	.716	.837
IO4	12.4237	7.605	.758	.819
IO5	12.8837	7.742	.733	.829
IO6	12.4332	7.932	.686	.849

Number of Items	**Cronbach's Alpha**
4	.870

Inter-item correlations were all above the threshold of 0.3; four item-to-total correlations had values higher than the benchmark of 0.5; and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.E.9: Construct Validity–Improvement Orientation (IO)

Indicator		
IO3	Correlation Coefficient Sig. (2-tailed) N	.833** .000 496
IO4	Correlation Coefficient Sig. (2-tailed) N	.863** .000 496
IO5	Correlation Coefficient Sig. (2-tailed) N	.849** .000 496
IO6	Correlation Coefficient Sig. (2-tailed) N	.818** .000 496

In conclusion, the indicators IO3, IO4, IO5, and IO6 summarised the most essential information contained in the construct Improvement Orientation, which originally consisted of 7 indicators.

F. Board of Commissioners Construct

Correlation Matrix

There were fifty-six pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.F.1: Correlation Matrix–Board of Commissioners (BOC)

Coefficient of Correlation	Pairs
.696	BOC1-BOC2
.705	BOC1-BOC3
.615	BOC1-BOC4
.504	BOC1-BOC5
.480	BOC1-BOC6
.533	BOC1-BOC7
.582	BOC1-BOC8
.571	BOC1-BOC9
.536	BOC1-BOC10
.458	BOC1-BOC11
.641	BOC2-BOC3
.585	BOC2-BOC4
.500	BOC2-BOC5
.450	BOC2-BOC6
.554	BOC2-BOC7
.550	BOC2-BOC8
.568	BOC2-BOC9
.491	BOC2-BOC10
.417	BOC2-BOC11
.795	BOC3-BOC4
.581	BOC3-BOC5
.528	BOC3-BOC6
.600	BOC3-BOC7
.667	BOC3-BOC8
.699	BOC3-BOC9
.629	BOC3-BOC10
.475	BOC3-BOC11
.556	BOC4-BOC5
.554	BOC4-BOC6
.623	BOC4-BOC7
.650	BOC4-BOC8
.680	BOC4-BOC9
.584	BOC4-BOC10
.448	BOC4-BOC11
.757	BOC5-BOC6
.619	BOC5-BOC7
.495	BOC5-BOC8
.518	BOC5-BOC9
.513	BOC5-BOC10
.460	BOC5-BOC11
.607	BOC6-BOC7
.486	BOC6-BOC8
.483	BOC6-BOC9
.514	BOC6-BOC10
.388	BOC6-BOC11
.590	BOC7-BOC8
.596	BOC7-BOC9
.609	BOC7-BOC10
.488	BOC7-BOC11

.838	BOC8-BOC9
.621	BOC8-BOC10
.465	BOC8-BOC11
.653	BOC9-BOC10
.465	BOC9-BOC11
.549	BOC10-BOC11

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Table 4.F.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Board of Commissioners (BOC)

		boc1	boc2	boc3	boc4	boc5	boc6	boc7	boc8	boc9	boc10	boc11
Anti-image Correlation	**boc1**	.926(a)	-0.402	-0.309	-0.107	-0.008	0.002	0.017	-0.062	0.055	-0.071	-0.024
	boc2	-0.402	.935(a)	-0.092	-0.001	-0.058	0.025	-0.150	-0.046	-0.066	0.093	-0.060
	boc3	-0.309	-0.092	.914(a)	-0.507	-0.111	0.032	0.036	-0.095	-0.069	-0.107	-0.017
	boc4	-0.107	-0.001	-0.507	.926(a)	0.023	-0.142	-0.130	-0.029	-0.100	0.033	0.001
	boc5	-0.008	-0.058	-0.111	0.023	.893(a)	-0.547	-0.188	0.040	-0.029	0.010	-0.154
	boc6	0.002	0.025	0.032	-0.142	-0.547	.884(a)	-0.138	-0.078	0.081	-0.126	0.076
	boc7	0.017	-0.150	0.036	-0.130	-0.188	-0.138	.960(a)	-0.018	-0.101	-0.177	-0.065
	boc8	-0.062	-0.046	-0.095	-0.029	0.040	-0.078	-0.018	.898(a)	-0.630	-0.043	-0.054
	boc9	0.055	-0.066	-0.069	-0.100	-0.029	0.081	-0.101	-0.630	.884(a)	-0.214	0.068
	boc10	-0.071	0.093	-0.107	0.033	0.010	-0.126	-0.177	-0.043	-0.214	.940(a)	-0.299
	boc11	-0.024	-0.060	-0.017	0.001	-0.154	0.076	-0.065	-0.054	0.068	-0.299	.931(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.F.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Board of Commissioners (BOC)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.916
Bartlett's Test of Sphericity	Approx. Chi-Square	4121.438
	Df	55
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.F.4: Communalities–Board of Commissioners (BOC)

	Initial	Extraction
BOC1	1.000	.740
BOC2	1.000	.658
BOC3	1.000	.820
BOC4	1.000	.767
BOC5	1.000	.843
BOC6	1.000	.854
BOC7	1.000	.675
BOC8	1.000	.752
BOC9	1.000	.752
BOC10	1.000	727
BOC11	1.000	.816

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 61.248% of the variance.

Table 4.F.5: Total Variance Explained-Eigenvalues–Board of Commissioners (BOC)

Component	Total	% of Variance	Cumulative %
1	6.737	61.248	61.248

Scree Plotting

Factor 1, with an Eigenvalue of 6.737, explained 61.248% of the variance.

Component Matrix

As there were seven pure indicators with loadings of more than 0.3 in one factor and four (4) complex indicators with loadings of more than 0.3 in two factors, rotation was necessary.

Table 4.F.6: Component Matrix–Board of Commissioners (BOC)

	Component		
	1	2	3
BOC1	.802	-.278	-.138
BOC2	.754	-.256	-.156
BOC3	.877	-.204	-.096
BOC4	.850	-.152	-.143
BOC5	.757	.468	-.225
BOC6	.723	.489	-.304
BOC7	.794	.209	-.034
BOC8	.823	-.241	.130
BOC9	.821	-.241	.145
BOC10	.780	.106	.328
BOC11	.591	.277	.625

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 2 pure indicators with loadings of above 0.3 in one factor, 7 complex indicators with loadings of more than 0.3 in two or more factors.

Table 4.F.7: Rotated Component Matrix–Board of Commissioners (BOC)

	Component		
	1	2	3
BOC1	.802	.277	.140
BOC2	.755	.276	.110
BOC3	.804	.348	.228
BOC4	.759	.394	.189
BOC5	.304	.830	.247
BOC6	.277	.865	.169
BOC7	.467	.574	.357
BOC8	.750	.188	.392
BOC9	.746	.180	.403
BOC10	.464	.322	.639
BOC11	.165	.209	.863

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.F.8: The Highest Reliability Score–Board of Commissioners (BOC)

Correlation Matrix				
	BOC3	**BOC4**	**BOC8**	**BOC9**
BOC3	1.000			
BOC4	.833	1.000		
BOC8	.697	.664	1.000	
BOC9	.692	.669	.843	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
BOC3	13.9865	6.383	.822	.886
BOC4	13.9502	6.363	.795	.896
BOC8	13.9354	6.589	.809	.891
BOC9	13.9421	6.556	.808	.892

Number of Items	**Cronbach's Alpha**
4	.916

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.F.9: Construct Validity–Board of Commissioners (BOC)

Indicator		
BOC3	Correlation Coefficient Sig. (2-tailed) N	.887** .000 496
BOC4	Correlation Coefficient Sig. (2-tailed) N	.872** .000 496
BOC8	Correlation Coefficient Sig. (2-tailed) N	.861** .000 496
BOC9	Correlation Coefficient Sig. (2-tailed) N	.878** .000 496

In conclusion, the indicators BOC3, BOC4, BOC8, and BOC9 summarised the most essential information contained in the construct Board of Commissioners, which originally consisted of 11 indicators.

G. Independent Commissioners Construct

Correlation Matrix

There were fifty-five pairs with a correlation above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.G.1: Correlation Matrix–Independent Commissioners (IC)

Coefficient of Correlation	Pairs
.672	IC1-IC2
.701	IC1-IC3
.695	IC1-IC4
.665	IC1-IC5
.674	IC1-IC6
.654	IC1-IC7
.617	IC1-IC8
.646	IC1-IC9
.579	IC1-IC10
.686	IC1-IC11
.762	IC2-IC3
.619	IC2-IC4
.595	IC2-IC5
.635	IC2-IC6
.634	IC2-IC7
.622	IC2-IC8
.646	IC2-IC9
.660	IC2-IC10
.681	IC2-IC11
.697	IC3-IC4
.657	IC3-IC5
.672	IC3-IC6
.677	IC3-IC7
.618	IC3-IC8
.684	IC3-IC9
.659	IC3-IC10
.736	IC3-IC11
.881	IC4-IC5
.773	IC4-IC6
.741	IC4-IC7
.729	IC4-IC8
.701	IC4-IC9
.636	IC4-IC10
.728	IC4-IC11
.780	IC5-IC6
.756	IC5-IC7
.722	IC5-IC8
.676	IC5-IC9
.615	IC5-IC10
.703	IC5-IC11
.800	IC6-IC7
.769	IC6-IC8
.712	IC6-IC9
.626	IC6-IC10
.737	IC6-IC11
.711	IC7-IC8
.673	IC7-IC9
.646	IC7-IC10
.723	IC7-IC11

.738	IC8-IC9
.652	IC8-IC10
.702	IC8-IC11
.730	IC9-IC10
.767	IC9-IC11
.768	IC10-IC11

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. As a result, the appropriateness of the factor analysis was inferred.

Table 4.G.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Independent Commissioners (IC)

		ic1	ic2	ic3	ic4	ic5	ic6	ic7	ic8	ic9	ic10	ic11
Anti-image Correlation	**ic1**	.973(a)	-0.213	-0.198	-0.108	-0.025	-0.066	-0.024	0.023	-0.085	0.076	-0.117
	ic2	-0.213	.946(a)	-0.399	-0.056	0.114	-0.039	-0.015	-0.056	-0.061	-0.169	0.010
	ic3	-0.198	-0.399	.955(a)	-0.073	-0.042	-0.004	-0.089	0.037	-0.036	-0.067	-0.131
	ic4	-0.108	-0.056	-0.073	.926(a)	-0.633	-0.015	-0.020	-0.072	0.019	-0.044	-0.088
	ic5	-0.025	0.114	-0.042	-0.633	.915(a)	-0.194	-0.174	-0.064	-0.015	0.018	0.004
	ic6	-0.066	-0.039	-0.004	-0.015	-0.194	.955(a)	-0.297	-0.306	-0.091	0.090	-0.155
	ic7	-0.024	-0.015	-0.089	-0.020	-0.174	-0.297	.972(a)	-0.111	0.000	-0.079	-0.078
	ic8	0.023	-0.056	0.037	-0.072	-0.064	-0.306	-0.111	.969(a)	-0.191	-0.096	-0.056
	ic9	-0.085	-0.061	-0.036	0.019	-0.015	-0.091	0.000	-0.191	.967(a)	-0.272	-0.218
	ic10	0.076	-0.169	-0.067	-0.044	0.018	0.090	-0.079	-0.096	-0.272	.954(a)	-0.306
	ic11	-0.117	0.010	-0.131	-0.088	0.004	-0.155	-0.078	-0.056	-0.218	-0.306	.964(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.G.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Independent Commissioners (IC)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.954
Bartlett's Test of Sphericity	Approx. Chi-Square	5829.046
	Df	55
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.G.4: Communalities–Independent Commissioners (IC)

	Initial	Extraction
IC1	1.000	.820
IC2	1.000	.853
IC3	1.000	.842
IC4	1.000	.871
IC5	1.000	.901
IC6	1.000	.848
IC7	1.000	.803
IC8	1.000	.813
IC9	1.000	.839
IC10	1.000	.863
IC11	1.000	.841

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 74.289% of the variance.

Table 4.G.5: Total Variance Explained-Eigenvalues

Component	Total	% of Variance	Cumulative %
1	8.172	74.289	74.289

Scree Plotting

Factor 1, with an Eigenvalue of 8.172, explained 74.289% of the variance.

Component Matrix

As nine pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Table 4.G.6: Component Matrix–Independent Commissioners (IC)

	Component		
	1	2	3
IC1	.817	.199	.334
IC2	.809	.425	.136
IC3	.857	.274	.183
IC4	.883	-.244	.177
IC5	.870	-.343	.160
IC6	.894	-.219	-.009
IC7	.874	-.200	.006
IC8	.871	-.170	-.164
IC9	.864	.095	-.288
IC10	.836	.195	-.356
IC11	.901	.052	-.159

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 11 complex indicators with loadings of above 0.3 in two or more factors.

Table 4.G.7: Rotated Component Matrix–Independent Commissioners (IC)

	Component		
	1	2	3
IC1	.462	.227	.745
IC2	.244	.432	.779
IC3	.396	.387	.732
IC4	.788	.292	.406
IC5	.848	.276	.325
IC6	.732	.452	.328
IC7	.709	.433	.337
IC8	.644	.575	.262
IC9	.417	.730	.363
IC10	.310	.791	.375
IC11	.504	.638	.425

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.G.8: The Highest Reliability Score–Independent Commissioners (IC)

Correlation Matrix				
	IC4	**IC5**	**IC6**	**IC7**
IC4	1.000			
IC5	.891	1.000		
IC6	.781	.803	1.000	
IC7	.760	.781	.819	1.000

Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
IC4	13.8750	8.114	.870	.923
IC5	13.8085	7.945	.890	.917
IC6	13.7964	8.223	.858	.927
IC7	13.9294	7.892	.837	.934

Number of Items	**Cronbach's Alpha**
4	.943

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.G.9: Construct Validity–Independent Commissioners (IC)

Indicator		
IC4	Correlation Coefficient Sig. (2-tailed) N	.905** .000 496
IC5	Correlation Coefficient Sig. (2-tailed) N	.915** .000 496
IC6	Correlation Coefficient Sig. (2-tailed) N	.898** .000 496
IC7	Correlation Coefficient Sig. (2-tailed) N	.908** .000 496

In conclusion, the indicators IC4, IC5, IC6 and IC7 summarised the most essential information contained in the construct Independent Commissioners, which originally consisted of 11 indicators.

H. Audit Committee Construct

Correlation Matrix

There were seventy-eight pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.H.1: Correlation Matrix–Audit Committee (AC)

Coefficient of Correlation	Pairs
.708	AC1-AC2
.561	AC1-AC3
.608	AC1-AC4
.599	AC1-AC5
.590	AC1-AC6
.543	AC1-AC7
.549	AC1-AC8
.564	AC1-AC9
.455	AC1-AC10
.529	AC1-AC11
.528	AC1-AC12
.575	AC1-AC13
.697	AC2-AC3
.696	AC2-AC4
.618	AC2-AC5
.622	AC2-AC6
.552	AC2-AC7
.601	AC2-AC8
.651	AC2-AC9
.549	AC2-AC10
.614	AC2-AC11
.549	AC2-AC12
.659	AC2-AC13
.781	AC3-AC4
.690	AC3-AC5
.610	AC3-AC6
.573	AC3-AC7
.614	AC3-AC8
.578	AC3-AC9
.550	AC3-AC10
.578	AC3-AC11
.548	AC3-AC12
.595	AC3-AC13
.735	AC4-AC5
.668	AC4-AC6
.665	AC4-AC7
.659	AC4-AC8
.639	AC4-AC9
.565	AC4-AC10
.595	AC4-AC11
.578	AC4-AC12
.605	AC4-AC13
.668	AC5-AC6
.627	AC5-AC7
.691	AC5-AC8
.665	AC5-AC9
.634	AC5-AC10
.592	AC5-AC11
.626	AC5-AC12

.646	AC5-AC13
.699	AC6-AC7
.741	AC6-AC8
.721	AC6-AC9
.644	AC6-AC10
.626	AC6-AC11
.593	AC6-AC12
.608	AC6-AC13
.731	AC7-AC8
.662	AC7-AC9
.582	AC7-AC10
.578	AC7-AC11
.585	AC7-AC12
.568	AC7-AC13
.780	AC8-AC9
.691	AC8-AC10
.643	AC8-AC11
.641	AC8-AC12
.637	AC8-AC13
.714	AC9-AC10
.686	AC9-AC11
.646	AC9-AC12
.652	AC9-AC13
.776	AC10-AC11
.674	AC10-AC12
.619	AC10-AC13
.702	AC11-AC12
.675	AC11-AC13
.732	AC12-AC13

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Consequently, the appropriateness of factor analysis was inferred.

Table 4.H.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Audit Committee (AC)

		ac1	ac2	ac3	ac4	ac5	ac6	ac7	ac8	ac9	ac10	ac11	ac12	ac13
Anti-image Correlation	**ac1**	.942(a)	-0.407	0.113	-0.126	-0.095	-0.096	-0.053	0.002	-0.042	0.099	-0.036	-0.095	0.026
	ac2	-0.407	.928(a)	-0.256	-0.071	0.000	-0.019	0.083	0.067	-0.158	0.032	-0.113	0.109	-0.251
	ac3	0.113	-0.256	.929(a)	-0.452	-0.232	-0.047	0.053	-0.070	0.085	0.041	-0.098	0.016	-0.045
	ac4	-0.126	-0.071	-0.452	.944(a)	-0.149	-0.082	-0.239	-0.020	-0.039	-0.004	0.027	-0.033	0.039
	ac5	-0.095	0.000	-0.232	-0.149	.970(a)	-0.070	-0.053	-0.084	0.009	-0.164	0.094	-0.060	-0.139
	ac6	-0.096	-0.019	-0.047	-0.082	-0.070	.974(a)	-0.204	-0.180	-0.188	-0.055	-0.017	0.035	-0.046
	ac7	-0.053	0.083	0.053	-0.239	-0.053	-0.204	.962(a)	-0.257	-0.046	0.019	-0.025	-0.089	-0.012
	ac8	0.002	0.067	-0.070	-0.020	-0.084	-0.180	-0.257	.956(a)	-0.311	-0.174	0.030	-0.093	-0.002
	ac9	-0.042	-0.158	0.085	-0.039	0.009	-0.188	-0.046	-0.311	.960(a)	-0.228	-0.054	-0.018	-0.062
	ac10	0.099	0.032	0.041	-0.004	-0.164	-0.055	0.019	-0.174	-0.228	.934(a)	-0.462	-0.075	0.061
	ac11	-0.036	-0.113	-0.098	0.027	0.094	-0.017	-0.025	0.030	-0.054	-0.462	.941(a)	-0.184	-0.176
	ac12	-0.095	0.109	0.016	-0.033	-0.060	0.035	-0.089	-0.093	-0.018	-0.075	-0.184	.953(a)	-0.383
	ac13	0.026	-0.251	-0.045	0.039	-0.139	-0.046	-0.012	-0.002	-0.062	0.061	-0.176	-0.383	.948(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.H.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Audit Committee (AC)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.950
Bartlett's Test of Sphericity	Approx. Chi-Square	5752.274
	Df	78
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.H.4: Communalities–Audit Committee (AC)

	Initial	Extraction
AC1	1.000	.712
AC2	1.000	.829
AC3	1.000	.757
AC4	1.000	.828
AC5	1.000	.724
AC6	1.000	.770
AC7	1.000	.775
AC8	1.000	.831
AC9	1.000	.774
AC10	1.000	.804
AC11	1.000	.814
AC12	1.000	.748
AC13	1.000	.782

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 66.809% of the variance.

Table 4.H.5: Total Variance Explained-Eigenvalues–Audit Committee (AC)

Component	Total	% of Variance	Cumulative %
1	8.685	66.809	66.809

Scree Plotting

Factor 1, with an Eigenvalue 8.685, explained 66.809% of the variance.

Component Matrix

As nine pure indicators with loadings of more than 0.3 in one factor were found and four (4) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Table 4.H.6: Component Matrix–Audit Committee (AC)

	Component		
	1	2	3
AC1	.724	.406	.154
AC2	.791	.387	.231
AC3	.804	.309	-.122
AC4	.846	.243	-.232
AC5	.834	.111	-.129
AC6	.846	-.062	-.225
AC7	.806	-.112	-.335
AC8	.857	-.221	-.216
AC9	.858	-.191	-.044
AC10	.813	-.370	.076
AC11	.821	-.229	.296
AC12	.796	-.201	.273
AC13	.821	-.002	.329

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were as 1 pure indicator with a loading of more than 0.3 in one factor, and 12 complex indicators with loadings above 0.3 in two or more factors.

Table 4.H.7: Rotated Component Matrix–Audit Committee (AC)

	Component		
	1	2	3
AC1	.247	.279	.757
AC2	.231	.374	.797
AC3	.527	.217	.658
AC4	.648	.213	.602
AC5	.587	.341	.513
AC6	.701	.389	.358
AC7	.770	.329	.271
AC8	.730	.490	.239
AC9	.592	.575	.304
AC10	.506	.722	.163
AC11	.315	.777	.333
AC12	.312	.733	.336
AC13	.246	.669	.524

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.H.8: The Highest Reliability Score–Audit Committee (AC)

Correlation Matrix				
	AC6	**AC7**	**AC8**	**AC9**
AC6	1.000			
AC7	.719	1.000		
AC8	.755	.744	1.000	
AC9	.745	.679	.790	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
AC6	13.4650	7.212	.814	.894
AC7	13.3327	7.576	.778	.906
AC8	13.5234	7.096	.848	.883
AC9	13.5254	7.391	.813	.895

Number of Items	**Cronbach's Alpha**
4	.919

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.H.9: Construct Validity–Audit Committee (AC)

Indicator		
AC6	Correlation Coefficient Sig. (2-tailed) N	.884** .000 496
AC7	Correlation Coefficient Sig. (2-tailed) N	.850** .000 496
AC8	Correlation Coefficient Sig. (2-tailed) N	.908** .000 496
AC9	Correlation Coefficient Sig. (2-tailed) N	.885** .000 496

In conclusion, the indicators AC6, AC7, AC8, and AC9 summarised the most essential information contained in the construct Audit Committee, which originally consisted of 13 indicators.

I. Board of Directors Construct

Correlation Matrix

There were one-hundred-and-thirty-six pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.I.1: Correlation Matrix-Board of Directors–Board of Directors (BOD)

Coefficient of Correlation	Pairs
.739	BOD1-BOD2
.620	BOD1-BOD3
.563	BOD1-BOD4
.562	BOD1-BOD5
.573	BOD1-BOD6
.506	BOD1-BOD7
.473	BOD1-BOD8
.465	BOD1-BOD9
.520	BOD1-BOD10
.457	BOD1-BOD11
.421	BOD1-BOD12
.406	BOD1-BOD13
.473	BOD1-BOD14
.525	BOD1-BOD15
.528	BOD1-BOD16
.502	BOD1-BOD17
.668	BOD2-BOD3
.628	BOD2-BOD4
.634	BOD2-BOD5
.640	BOD2-BOD6
.634	BOD2-BOD7
.577	BOD2-BOD8
.524	BOD2-BOD9
.563	BOD2-BOD10
.494	BOD2-BOD11
.470	BOD2-BOD12
.471	BOD2-BOD13
.565	BOD2-BOD14
.572	BOD2-BOD15
.622	BOD2-BOD16
.552	BOD2-BOD17
.794	BOD3-BOD4
.671	BOD3-BOD5
.619	BOD3-BOD6
.575	BOD3-BOD7
.532	BOD3-BOD8
.535	BOD3-BOD9
.542	BOD3-BOD10
.551	BOD3-BOD11
.531	BOD3-BOD12
.559	BOD3-BOD13

.612	BOD3-BOD14
.591	BOD3-BOD15
.556	BOD3-BOD16
.578	BOD3-BOD17
.691	BOD4-BOD5
.639	BOD4-BOD6
.603	BOD4-BOD7
.567	BOD4-BOD8
.575	BOD4-BOD9
.536	BOD4-BOD10
.528	BOD4-BOD11
.530	BOD4-BOD12
.515	BOD4-BOD13
.584	BOD4-BOD14
.591	BOD4-BOD15
.579	BOD4-BOD16
.558	BOD4-BOD17
.791	BOD5-BOD6
.639	BOD5-BOD7
.581	BOD5-BOD8
.625	BOD5-BOD9
.610	BOD5-BOD10
.587	BOD5-BOD11
.550	BOD5-BOD12
.521	BOD5-BOD13
.570	BOD5-BOD14
.618	BOD5-BOD15
.631	BOD5-BOD16
.619	BOD5-BOD17
.664	BOD6-BOD7
.583	BOD6-BOD8
.595	BOD6-BOD9
.607	BOD6-BOD10
.538	BOD6-BOD11
.538	BOD6-BOD12
.516	BOD6-BOD13
.555	BOD6-BOD14
.601	BOD6-BOD15
.621	BOD6-BOD16
.602	BOD6-BOD17
.779	BOD7-BOD8
.712	BOD7-BOD9
.588	BOD7-BOD10
.511	BOD7-BOD11
.491	BOD7-BOD12
.492	BOD7-BOD13
.559	BOD7-BOD14
.604	BOD7-BOD15
.638	BOD7-BOD16
.673	BOD7-BOD17
.741	BOD8-BOD9
.552	BOD8-BOD10
.463	BOD8-BOD11
.449	BOD8-BOD12
.483	BOD8-BOD13
.533	BOD8-BOD14
.574	BOD8-BOD15
.644	BOD8-BOD16
.641	BOD8-BOD17
.598	BOD9-BOD10
.511	BOD9-BOD11
.520	BOD9-BOD12
.552	BOD9-BOD13
.560	BOD9-BOD14

.584	BOD9-BOD15
.604	BOD9-BOD16
.632	BOD9-BOD17
.611	BOD10-BOD11
.549	BOD10-BOD12
.547	BOD10-BOD13
.556	BOD10-BOD14
.606	BOD10-BOD15
.597	BOD10-BOD16
.601	BOD10-BOD17
.702	BOD11-BOD12
.557	BOD11-BOD13
.546	BOD11-BOD14
.533	BOD11-BOD15
.560	BOD11-BOD16
.539	BOD11-BOD17
.673	BOD12-BOD13
.581	BOD12-BOD14
.549	BOD12-BOD15
.563	BOD12-BOD16
.538	BOD12-BOD17
.616	BOD13-BOD14
.580	BOD13-BOD15
.578	BOD13-BOD16
580	BOD13-BOD17
.702	BOD14-BOD15
.645	BOD14-BOD16
.614	BOD14-BOD17
.718	BOD15-BOD16
.676	BOD15-BOD17
.702	BOD16-BOD17

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Table 4.I.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA)–Board of Directors (BOD)

		bod1	bod2	bod3	bod4	bod5	bod6	bod7	bod8	bod9	bod10	bod11	bod12	bod13	bod14	bod15	bod16	bod17
Anti-image Correlation	**bod1**	.935(a)	-0.502	-0.143	-0.025	0.060	-0.077	0.060	0.006	0.004	-0.081	-0.041	-0.016	0.066	0.063	-0.075	-0.014	-0.054
	bod2	-0.502	.940(a)	-0.088	-0.026	-0.063	-0.063	-0.146	-0.099	0.082	-0.046	0.036	0.003	-0.010	-0.087	0.080	-0.164	0.047
	bod3	-0.143	-0.088	.936(a)	-0.556	-0.084	0.013	-0.039	0.022	0.054	0.012	-0.039	0.013	-0.134	-0.104	0.000	0.090	-0.101
	bod4	-0.025	-0.026	-0.556	.941(a)	-0.146	-0.054	-0.026	-0.047	-0.091	0.034	0.027	-0.081	0.044	0.006	-0.071	-0.016	0.062
	bod5	0.060	-0.063	-0.084	-0.146	.949(a)	-0.500	0.012	0.026	-0.092	-0.056	-0.107	0.018	0.027	0.040	-0.028	-0.098	-0.029
	bod6	-0.077	-0.063	0.013	-0.054	-0.500	.951(a)	-0.162	0.048	0.004	-0.060	0.035	-0.025	-0.014	-0.041	-0.048	-0.011	-0.024
	bod7	0.060	-0.146	-0.039	-0.026	0.012	-0.162	.957(a)	-0.402	-0.169	-0.033	-0.036	-0.010	0.058	0.042	-0.011	-0.021	-0.161
	bod8	0.006	-0.099	0.022	-0.047	0.026	0.048	-0.402	.943(a)	-0.378	-0.054	0.008	0.082	0.006	-0.007	-0.044	-0.121	-0.037
	bod9	0.004	0.082	0.054	-0.091	-0.092	0.004	-0.169	-0.378	.961(a)	-0.151	-0.030	-0.048	-0.094	-0.028	0.003	-0.002	-0.079
	bod10	-0.081	-0.046	0.012	0.034	-0.056	-0.060	-0.033	-0.054	-0.151	.975(a)	-0.269	0.029	-0.097	-0.050	-0.028	0.020	-0.018
	bod11	-0.041	0.036	-0.039	0.027	-0.107	0.035	-0.036	0.008	-0.030	-0.269	.944(a)	-0.424	0.005	-0.025	0.006	0.010	-0.025
	bod12	-0.016	0.003	0.013	-0.081	0.018	-0.025	-0.010	0.082	-0.048	0.029	-0.424	.933(a)	-0.381	-0.074	-0.001	-0.061	-0.035
	bod13	0.066	-0.010	-0.134	0.044	0.027	-0.014	0.058	0.006	-0.094	-0.097	0.005	-0.381	.955(a)	-0.155	-0.062	-0.047	-0.069
	bod14	0.063	-0.087	-0.104	0.006	0.040	-0.041	0.042	-0.007	-0.028	-0.050	-0.025	-0.074	-0.155	.961(a)	-0.381	-0.052	-0.043
	bod15	-0.075	0.080	0.000	-0.071	-0.028	-0.048	-0.011	-0.044	0.003	-0.028	0.006	-0.001	-0.062	-0.381	.960(a)	-0.221	-0.115
	bod16	-0.014	-0.164	0.090	-0.016	-0.098	-0.011	-0.021	-0.121	-0.002	0.020	0.010	-0.061	-0.047	-0.052	-0.221	.968(a)	-0.276
	bod17	-0.054	0.047	-0.101	0.062	-0.029	-0.024	-0.161	-0.037	-0.079	-0.018	-0.025	-0.035	-0.069	-0.043	-0.115	-0.276	.975(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was signifacant. Consequently, factorability is inferred.

Table 4.I.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)–Board of Directors (BOD)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.952
Bartlett's Test of Sphericity	Approx. Chi-Square	6962.536
	Df	136
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.I.4: Communalities–Board of Directors (BOD)

	Initial	Extraction
BOD1	1.000	.714
BOD2	1.000	.755
BOD3	1.000	.767
BOD4	1.000	.730
BOD5	1.000	.685
BOD6	1.000	.680
BOD7	1.000	.815
BOD8	1.000	.837
BOD9	1.000	.783
BOD10	1.000	.591
BOD11	1.000	.670
BOD12	1.000	.790
BOD13	1.000	.733
BOD14	1.000	.637
BOD15	1.000	.641
BOD16	1.000	.679
BOD17	1.000	.693

Total Variance Explained

Two factors had an Eigenvalues above 1.0 and these explained 66.807% of the variance.

Table 4.I.5: Total Variance Explained-Eigenvalues–Board of Directors (BOD)

Component	Total	% of Variance	Cumulative %
1	10.325	60.734	60.734
2	1.032	6.073	66.807

Scree Plotting

Factor 1, with an Eigenvalue of 10.325, explained 60.734% of the variance. Factor 2, with an Eigenvalues of 1.032 explained 6.073% of the variance

Component Matrix

As twelve pure indicators with loadings of more than 0.3 in one factor were found and five (5) complex indicators with loadings of more than 0.3 in two or more factors emerged, rotation was necessary.

Table 4.I.6: Component Matrix–Board of Directors (BOD)

	Component		
	1	2	3
BOD1	.705	-.325	.334
BOD2	.783	-.326	.191
BOD3	.799	-.114	.340
BOD4	.798	-.156	.262
BOD5	.811	-.138	.092
BOD6	.803	-.173	.080
BOD7	.822	-.203	-.313
BOD8	.794	-.196	-.411
BOD9	.806	-.028	-.363
BOD10	.753	.117	-.104
BOD11	.718	.387	.069
BOD12	.734	.481	.143
BOD13	.730	.441	.073
BOD14	.763	.228	.047
BOD15	.792	.109	-.039
BOD16	.811	-.026	-.144
BOD17	.812	.017	-.181

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were three pure indicators with loadings of more than 0.3 in one factor, and 13 complex indicators with loadings above 0.3 in two or more factors.

Table 4.I.7: Rotated Component Matrix–Board of Directors (BOD)

	Component		
	1	2	3
BOD1	.239	.788	.190
BOD2	.395	.745	.208
BOD3	.238	.734	.415
BOD4	.308	.708	.367
BOD5	.441	.601	.360
BOD6	.454	.607	.325
BOD7	.775	.392	.244
BOD8	.832	.312	.217
BOD9	.762	.259	.369

BOD10	.495	.311	.500
BOD11	.274	.253	.728
BOD12	.204	.258	.826
BOD13	.266	.234	.780
BOD14	.358	.350	.622
BOD15	.470	.378	.527
BOD16	.595	.396	.410
BOD17	.614	.351	.439

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.I.8: The Highest Reliability Score–Board of Directors (BOD)

Correlation Matrix				
	BOD7	**BOD8**	**BOD9**	**BOD17**
BOD7	1.000			
BOD8	.799	1.000		
BOD9	.739	.775	1.000	
BOD17	.685	.649	.653	1.000

Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
BOD7	13.4560	7.591	.832	.871
BOD8	13.6694	7.136	.832	.871
BOD9	13.5974	7.422	.806	.880
BOD17	13.3724	8.233	.719	.909

Number of Items	**Cronbach's Alpha**
4	.910

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.I.9: Construct Validity–Board of Directors (BOD)

Indicator		
BOD7	Correlation Coefficient Sig. (2-tailed) N	.896** .000 496
BOD8	Correlation Coefficient Sig. (2-tailed) N	.908** .000 496
BOD9	Correlation Coefficient Sig. (2-tailed) N	.867** .000 496
BOD17	Correlation Coefficient Sig. (2-tailed) N	.813** .000 496

In conclusion, the indicators BOD7, BOD8, BOD9, and BOD17 summarised the most essential information contained in the Board of Directors construct, which originally consisted of 17 indicators.

J. Internal Control Group Construct

Correlation Matrix

There were ten pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.J.1: Correlation Matrix–Internal Control Group (ICG)

Coefficient of Correlation	Pairs
.762	ICG1-ICG2
.653	ICG1-ICG3
.587	ICG1-ICG4
.532	ICG1-ICG5
.767	ICG2-ICG3
.601	ICG2-ICG4
.571	ICG2-ICG5
.638	ICG3-ICG4
.606	ICG3-ICG5
.697	ICG4-ICG5

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Table 4.J.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Internal Control Group (ICG)

		icg1	icg2	icg3	icg4	icg5
Anti-image Correlation	**icg1**	.857(a)	-0.492	-0.079	-0.148	-0.021
	icg2	-0.492	.798(a)	-0.485	-0.056	-0.063
	icg3	-0.079	-0.485	.853(a)	-0.226	-0.179
	icg4	-0.148	-0.056	-0.226	.855(a)	-0.455
	icg5	-0.021	-0.063	-0.179	-0.455	.857(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.J.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Internal Control Group (ICG)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.842
Bartlett's Test of Sphericity	Approx. Chi-Square	1613.064
	Df	10
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.J.4: Communalities–Internal Control Group (ICG)

	Initial	Extraction
ICG1	1.000	.971
ICG2	1.000	.891
ICG3	1.000	.945
ICG4	1.000	.835
ICG5	1.000	.878

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 72.000% of the variance.

Table 4.J.5: Total Variance Explained-Eigenvalues–Internal Control Group (ICG)

Component	Total	% of Variance	Cumulative %
1	3.600	72.000	72.000

Scree Plotting

Factor 1, with an Eigenvalue of 3.600, explained 72.000% of the variance.

Component Matrix

As two pure indicators with loadings of more than 0.3 in one factor were found and three (3) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Table 4.J.6: Component Matrix–Internal Control Group (ICG)

	Component		
	1	2	3
ICG1	.831	-.382	.367
ICG2	.886	-.301	-.122
ICG3	.885	-.096	-.390
ICG4	.841	.331	.138
ICG5	.796	.492	.041

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 1 pure indicator with a loading above 0.3 in one factor and 4 complex indicators with loadings of more than 0.3 in two factors.

Table 4.J.7: Rotated Component Matrix–Internal Control Group (ICG)

	Component		
	1	2	3
ICG1	.281	.322	.888
ICG2	.291	.700	.562
ICG3	.401	.841	.276
ICG4	.795	.291	.344
ICG5	.875	.290	.168

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.J.8: The Highest Reliability Score–Internal Control Group (ICG)

Correlation Matrix				
	ICG1	**ICG2**	**ICG3**	**ICG4**
ICG1	1.000			
ICG2	.760	1.000		
ICG3	.660	.784	1.000	
ICG4	.586	.623	.669	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
ICG1	13.3865	7.801	.755	.870
ICG2	13.5872	6.994	.833	.840
ICG3	13.5953	7.394	.804	.851
ICG4	13.2209	8.608	.690	.893

Number of Items	**Cronbach's Alpha**
4	.895

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.J.9: Construct Validity–Internal Control Group (ICG)

Indicator		
ICG1	Correlation Coefficient Sig. (2-tailed) N	.857** .000 496
ICG2	Correlation Coefficient Sig. (2-tailed) N	.918** .000 496
ICG3	Correlation Coefficient Sig. (2-tailed) N	.883** .000 496
ICG4	Correlation Coefficient Sig. (2-tailed) N	.766** .000 496

In conclusion, the indicators ICG1, ICG2, ICG4, and ICG4 summarised the most essential information contained in the Internal Control Group construct, which originally consisted of 5 indicators.

K. Codes of Conduct Construct

Correlation Matrix

There were twenty-one pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.K.1: Correlation Matrix–Code of Conducts (COC)

Coefficient of Correlation	Pairs
.703	COC1-COC2
.612	COC1-COC3
.616	COC1-COC4
.665	COC1-COC5
.608	COC1-COC6
.666	COC1-COC7
.680	COC2-COC3
.684	COC2-COC4
.674	COC2-COC5
.626	COC2-COC6
.657	COC2-COC7
.823	COC3-COC4
.719	COC3-COC5
.676	COC3-COC6
.650	COC3-COC7
.739	COC4-COC5
.669	COC4-COC6
.685	COC4-COC7
.732	COC5-COC6
.732	COC5-COC7
.784	COC6-COC7

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Consequently, the appropriateness of factor analysis was inferred.

Table 4.K.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Code of Conducts (COC)

		coc1	coc2	coc3	coc4	coc5	coc6	coc7
Anti-image Correlation	**coc1**	.921(a)	-0.370	-0.059	0.031	-0.189	-0.015	-0.229
	coc2	-0.370	.936(a)	-0.115	-0.137	-0.102	-0.041	-0.087
	coc3	-0.059	-0.115	.876(a)	-0.563	-0.154	-0.183	0.113
	coc4	0.031	-0.137	-0.563	.884(a)	-0.141	-0.010	-0.186
	coc5	-0.189	-0.102	-0.154	-0.141	.948(a)	-0.176	-0.221
	coc6	-0.015	-0.041	-0.183	-0.010	-0.176	.916(a)	-0.438
	coc7	-0.229	-0.087	0.113	-0.186	-0.221	-0.438	.897(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.K.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Code of Conducts (COC)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.910
Bartlett's Test of Sphericity	Approx. Chi-Square	2899.613
	Df	21
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.K.4: Communalities–Code of Conducts (COC)

	Initial	Extraction
COC1	1.000	.882
COC2	1.000	.858
COC3	1.000	.911
COC4	1.000	.895
COC5	1.000	.789
COC6	1.000	.887
COC7	1.000	.876

Total Variance Explained

One factor had an Eigenvalue above 1.0 and this explained 73.543% of the variance.

Table 4.K.5: Total Variance Explained-Eigenvalues–Code of Conducts (COC)

Component	Total	% of Variance	Cumulative %
1	5.148	73.543	73.543

Scree Plotting

Factor 1, with an Eigenvalue of 5.148, explained 73.543% of the variance.

Component Matrix

As five (5) pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two factors emerged, rotation was necessary.

Table 4.K.6: Component Matrix–Code of Conducts (COC)

	Component		
	1	2	3
COC1	.829	.368	.244
COC2	.841	.159	.355
COC3	.853	-.414	.107
COC4	.868	-.368	.070
COC5	.883	.021	-.088
COC6	.852	.056	-.396
COC7	.875	.192	-.272

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 7 complex indicators with loadings above 0.3 in two or more factors.

Table 4.K.7: Rotated Component Matrix–Code of Conducts (COC)

	Component		
	1	2	3
COC1	.399	.238	.816
COC2	.271	.432	.774
COC3	.326	.843	.306
COC4	.374	.809	.318
COC5	.600	.478	.448
COC6	.825	.372	.260
COC7	.777	.302	.425

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.K.8: The Highest Reliability Score–Code of Conducts (COC)

Correlation Matrix				
	COC4	**COC5**	**COC6**	**COC7**
COC4	1.000			
COC5	.724	1.000		
COC6	.671	.724	1.000	
COC7	.695	.752	.782	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
COC4	13.1129	8.921	.760	.898
COC5	13.2218	9.009	.814	.881
COC6	13.4899	8.016	.803	.886
COC7	13.2724	8.858	.830	.875

Number of Items	**Cronbach's Alpha**
4	.911

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.K.9: Construct Validity–Code of Conducts (COC)

Indicator		
COC4	Correlation Coefficient Sig. (2-tailed) N	.867** .000 496
COC5	Correlation Coefficient Sig. (2-tailed) N	.882** .000 496
COC6	Correlation Coefficient Sig. (2-tailed) N	.906** .000 496
COC7	Correlation Coefficient Sig. (2-tailed) N	.886** .000 496

In conclusion, the indicators COC4, COC5, COC6, and COC7 summarised the most essential information contained in the Code of Conducts construct, which originally consisted of 7 indicators.

L. Organisational Performance Construct

Correlation Matrix

There were twenty-eight pairs with correlations above 0.3. Accordingly, the correlation matrix was deemed appropriate for factor analysis.

Table 4.L.1: Correlation Matrix–Organisational Performance (OP)

Coefficient of Correlation	Pairs
.624	OP1-OP2
.596	OP1-OP3
.564	OP1-OP4
.580	OP1-OP5
.509	OP1-OP6
.456	OP1-OP7
.456	OP1-OP8
.665	OP2-OP3
.653	OP2-OP4
.788	OP2-OP5
.703	OP2-OP6
.591	OP2-OP7
.605	OP2-OP8
.813	OP3-OP4
.642	OP3-OP5
.609	OP3-OP6
.520	OP3-OP7
.549	OP3-OP8
.702	OP4-OP5
.660	OP4-OP6
.555	OP4-OP7
.573	OP4-OP8
.811	OP5-OP6
.650	OP5-OP7
.710	OP5-OP8
.672	OP6-OP7
.683	OP6-OP8
.718	OP7-OP8

Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) Matrix

All anti-image correlations were small and MSA values were above the threshold of 0.5. Therefore, the appropriateness of factor analysis was inferred.

Table 4.L.2: Anti-image Correlation-Measure of Sampling Adequacy (AIM-MSA) –Organisational Performance (OP)

		op1	op2	op3	op4	op5	op6	op7	op8
Anti-image Correlation	**op1**	.945(a)	-0.243	-0.228	-0.021	-0.091	0.054	-0.045	0.007
	op2	-0.243	.912(a)	-0.204	0.077	-0.413	-0.117	-0.106	0.041
	op3	-0.228	-0.204	.853(a)	-0.620	0.100	-0.015	0.020	-0.093
	op4	-0.021	0.077	-0.620	.868(a)	-0.209	-0.131	-0.053	0.008
	op5	-0.091	-0.413	0.100	-0.209	.892(a)	-0.376	-0.030	-0.203
	op6	0.054	-0.117	-0.015	-0.131	-0.376	.932(a)	-0.185	-0.148
	op7	-0.045	-0.106	0.020	-0.053	-0.030	-0.185	.919(a)	-0.428
	op8	0.007	0.041	-0.093	0.008	-0.203	-0.148	-0.428	.914(a)

a. Measures of Sampling Adequacy(MSA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)

KMO was greater than 0.6, and Bartlett's Test was significant. Consequently, factorability was inferred.

Table 4.L.3: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) – Organisational Performance (OP)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.902
Bartlett's Test of Sphericity	Approx. Chi-Square	3161.364
	Df	28
	Sig	.000

Communalities

There were no exceptions, as all variables scored above the threshold of 0.5. The criterion for communality was fulfilled.

Table 4.L.4: Communalities–Organisational Performance (OP)

	Initial	Extraction
OP1	1.000	.914
OP2	1.000	.794
OP3	1.000	.904
OP4	1.000	.916
OP5	1.000	.819
OP6	1.000	.788
OP7	1.000	.788
OP8	1.000	.797

Total Variance Explained

One factor had an Eigenvalue above 1.0, and this explained 68.457% of the variance.

Table 4.L.5: Total Variance Explained-Eigenvalues–Organisational Performance (OP)

Component	Total	% of Variance	Cumulative %
1	5.477	68.457	68.457

Scree Plotting

Factor 1, with an Eigenvalue of 5.477 explained 68.457% of the variance.

Component Matrix

As six (6) pure indicators with loadings of more than 0.3 in one factor were found and two (2) complex indicators with loadings of more than 0.3 in two or more factors emerged, rotation was necessary.

Table 4.L.6: Component Matrix–Organisational Performance (OP)

	Component		
	1	2	3
OP1	.725	.428	.453
OP2	.859	.068	.224
OP3	.823	.369	-.300
OP4	.839	.256	-.382
OP5	.896	-.101	.083
OP6	.863	-.206	-.030
OP7	.797	-.389	.035
OP8	.805	-.384	-.039

Extraction Method: Principal Component Analysis

Rotated Component Matrix

Results showed that there were 2 pure indicators with loadings above 0.3 in one factor, and 6 complex indicators with loadings more than 0.3 in two or more factors.

Table 4.L.7: Rotated Component Matrix–Organisational Performance (OP)

	Component		
	1	2	3
OP1	.217	.292	.884
OP2	.559	.345	.601
OP3	.299	.831	.352
OP4	.387	.840	.243
OP5	.700	.378	.432
OP6	.749	.385	.281
OP7	.836	.216	.207
OP8	.835	.273	.159

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalisation

Reliability Analysis

As the objective of the factor analysis was to have no more than 4 indicators, the process of deleting indicators was applied based on the highest possible Cronbach's alpha if the item was to be deleted.

Table 4.L.8: The Highest Reliability Score–Organisational Performance (OP)

Correlation Matrix				
	OP2	**OP4**	**OP5**	**OP6**
OP2	1.000			
OP4	.639	1.000		
OP5	.795	.699	1.000	
OP6	.709	.669	.804	1.000
Item-Total Statistic				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Indicator-Total Correlation**	**Cronbach's Alpha if Item Deleted**
OP2	7.8357	10.715	.790	.886
OP4	7.7027	10.779	.727	.909
OP5	7.8206	10.273	.865	.860
OP6	7.6845	10.529	.809	.880

Number of Items	**Cronbach's Alpha**
4	0.910

Inter-item correlations were all above the threshold of 0.3, four item-to-total correlations had values higher than the benchmark of 0.5, and Cronbach's alpha was above 0.60. The results of the reliability analysis were very good.

Construct Validity

The Spearman correlation coefficients of four (4) indicators with their total score were significant, indicating that those indicators captured the underlying construct they purported to measure.

Table 4.L.9: Construct Validity – Organisational Performance (OP)

Indicator		
OP2	Correlation Coefficient Sig. (2-tailed) N	.873** .000 496
OP4	Correlation Coefficient Sig. (2-tailed) N	.853** .000 496
OP5	Correlation Coefficient Sig. (2-tailed) N	.919** .000 496
OP6	Correlation Coefficient Sig. (2-tailed) N	.890** .000 496

In conclusion, the indicators OP2, OP4, OP5, and OP6 summarised the most essential information contained in the Organisational Performance construct, which originally consisted of 8 indicators.